DOCUMENT RESUME

ED 148 971 UD 017 806

AUTHOR	Arneklev, Bruce L.
TITLE	Year-End Evaluation, Emergency School Aid Act (ESAA) 1976-77; Tacoma Public Schools.
INSTITUTION	Tacoma School District 10, Wash.
PUB DATE	Oct 77
NOTE	123p.; Some parts of document may be marginally legible due to quality of print
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	Elementary Secondary Education; *Program Descriptions; *Program Effectiveness; *Program Evaluation; Public Schools; *School Integration
IDENTIFIERS	*Emergency School Aid Act; Tacoma Public School District WA; *Washington (Tacoma)

ABSTRACT

This evaluation report for the 1976-77 Tacoma Public Schools Emergency School Aid Act (ESAA) program is organized around the six priority needs and eleven related objectives which were specified in the applications for funds. Each need and objective is listed along with related data. Conclusions about objective attainment are made in terms of desired progress from 1976 to 1977 as specified in the application. The summary of outcomes indicates that two objectives out of eleven were completely attained during the 1976-77 school year at both the elementary and junior high school levels (sociability among Native Americans, and emotional stability/compliance among blacks and native Americans). Partial attainment was realized on all except one of the other objectives (increasing choosing of blacks by anglos). It is also noted that several factors were operating concurrently with the ESAA efforts that may have served to mediate against attainment of at least some of the objectives. The relatively constant decrease in the proportion of Caucasian enrollment in Tacoma's schools particularly at schools in Central and Southeast Tacoma, indicates that the study be continued for the formulation of a comprehensive long range plan to prevent segregation. (Author/AM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

UW

JAN 10 1978

ED148971

YEAR-END EVALUATION

EMERGENCY SCHOOL AID ACT

(ESAA)

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

1976-77

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Bruce L. Arnekler

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

TACOMA PUBLIC SCHOOLS

BOARD OF EDUCATION

Norman R. Anderson, President
David R. Tuell, Jr., Vice President
J. L. Boze
Adele C. Durkin
Frank J. Gillihan

SUPERINTENDENT

Alex Sergienko

OCTOBER 1977

UD017808

TABLE OF CONTENTS

page

SUMMARY AND RECOMMENDATIONS 1

EVALUATION DATA AND CONCLUSIONS RELATED TO PRIORITIZED OBJECTIVES 4

I. Reducing Clanishness 4

II. Improving Teacher Ratings of Student Sociability, Competence, and Emotional Stability/Compliance 5

III. Improving Academic Achievement 7

IV. Improving Parent Participation 9

V. Improving Attitude Toward School and Self-Esteem 10

VI. Increasing Student Participation and Reducing Perceived Aggression 11

APPENDICES 13

A. Integration Survey Frequency Distributions by Objective 15

B. Trend Lines for Evaluating Integrated Education in Tacoma 29

C. Central Tendency Trends at Elementary and Junior High School Levels 41

D. Central Tendency Trends for Each Junior High School 42

E. Central Tendency Trends for Each Elementary School. 44

F. Linking Tests and Equating Raw Scores 48

G. Improving Criterion-Related Validity by Adjusting Self-Concept Scores 69

H. Integration Survey Variables and Materials 79

I. Tacoma's Ethnic Enrollment Trend 99

SUMMARY AND RECOMMENDATIONS

The summary of outcomes below indicates that two objectives out of eleven were completely attained during the 1976-77 school year at both the elementary and junior high school levels. Partial attainment was realized on all except one of the other objectives. Data reported later in this report on the one objective not attained reflect that district status was maintained at the elementary level and improved at the junior high level, but improvement to the extent specified by criterion in the application was not realized for that one objective.

Box Score for 1976-77 ESAA Objective Attainment*

PRIORITY NEED/OBJECTIVE OUTCOME	ELEMENTARY			JUNIOR HIGH		
	NOT ATTAINED	PARTIAL ATTAINMENT	COMPLETE ATTAINMENT	NOT ATTAINED	PARTIAL ATTAINMENT	COMPLETE ATTAINMENT
I. To provide activities to reduce clanishness.						
A. Increasing choosing of Blacks by Anglos	X			X		
B. Increasing choosing of Anglos by Blacks			X	X		
II. To develop multi-ethnic curriculum to improve teacher ratings of student:						
A. Sociability among Native Americans			X			X
B. Emotional stability/compliance among Blacks and Native Americans		X				X
C. Competence among Blacks, Native Americans, and Latin Americans		X			X	
III. To improve levels of academic achievement in all five ethnic groups.		X			X	
IV. To improve parent participation in all five ethnic groups.		X			X	
V. To improve:						
A. Attitude toward school		X			X	
B. Self-esteem		X			X	
VI. To: (at Junior High only)						
A. Increase student participation					X	
B. Reduce perceived aggression					X	

* Levels of attainment are defined as follows:

Not attained = Criterion was met by none of the ethnic groups specified.
Partial attainment = Criterion was met by one or more of the ethnic groups specified.
Complete attainment = Criterion was met by all of the ethnic groups specified.

It should be noted that the program was implemented largely according to plan (this in and of itself is the major criterion used for judgment of success in many programs). The plan permitted twenty-one schools to expend ESAA funds in ways they felt would best meet the needs of children in their schools under ESAA guidelines. ESAA funds in this way served to supplement the regular program in those schools. It is important to note that the supplement constitutes less than one percent of the total district budget, while the outcomes sought are reflective of total district effort. Thus, the ESAA program in and of itself should not take total credit or responsibility for the outcomes realized.

It should also be noted that several factors are operating concurrently with the ESAA efforts that may serve to mediate against attainment of at least some of the objectives as they are specified.

A. One factor to be considered is the decreasing percentage of caucasian students enrolled in the district.

B. A second factor is the emphasis during the past year for improving basic skills. On the one hand, emphasizing basic skills is in tune with overcoming one of the greatest needs of Black, Native American, and Latin American students; on the other hand, it focuses attention on areas of functioning where they have historically been disadvantaged.

   (1) Differences between ethnic groups in Tacoma are very similar to those documented through studies in other areas of the country. (e.g., the Coleman report, or the National ESAA evaluation by the Systems Development Corporation).

   (2) Differences between groups have been relatively constant for 1973, 1974, 1975, and 1976.

   (3) The standings of Black students at individual schools are remarkably similar when allowances are made for confounding factors which become evident in small samples.

   (4) Changes in scores from one year to the next for any one group at any one school appear to be more a function of apptitude of students than of curriculum variations.

C. Finally, attempts to meet specific needs by targeting instruction have an inherent tendency to promote segregation in the instructional process. Screening students for participation in various courses on the basis of standardized or cirterion-referenced testing can result in a disproportionate representation in "lower" level courses by Black, Native American, and Latin American students. These results in turn have a tendency to strengthen stereotyping and predjudical attitudes.

The Following Conclusions and Recommendations are Made:

The relatively constant decrease of proportion Caucasian enrollment in Tacoma's schools (as depicted in Appendix I) particularly at schools in Central and Southeast Tacoma, dictates that study be continued for the formulation of a comprehensive long-range plan to prevent segregation.

Increased District attention to basic skills as measured by standardized tests tends to emphasize areas of performance where Black, Native American and Latin/Mexican American students have historically been disadvantaged. Alternative models of instruction and testing must be explored to insure that low performing students find options where they can demonstrate excellence and gain recognition.

Curriculum which is focused to specific objectives or specific groups must be monitored to insure that criteria for selection of students does not inadvertently contribute to undesirable side effects from segregated instructional settings.

EVALUATION DATA AND CONCLUSIONS RELATED TO PRIORITIZED OBJECTIVES

This evaluation report for the 1976-77 Tacoma Public Schools ESAA program is organized around the six priority needs and eleven related objectives which were specified in the application for funds. Each need and objective is listed in turn along with related data. Conclusions about objective attainment in this section are made in terms of desired progress from 1976 to 1977 as specified in the application. Appendices are used to provide extensions and variations in the way the data in this section can be presented. Variations include: Integration Survey Frequency Distributions by Ethnicity (Appendix A), Trend Lines for Evaluating Integrated Education in Tacoma (Appendix B), Central Tendency Trends at Elementary and Junior High Schools (Appendix C), Central Tendency Trends at Each Junior High School (Appendix D), and Central Tendency Trends for Each Elementary School (Appendix E). Several other appendices amplify technical procedures used in acquiring and processing data for this report.

I. Reducing Clanishness

The first priority need was to provide activities to alleviate clanishness among ethnic groups. Even though students from different ethnic groups were in physical proximity due to a successful desegregation program, data indicate that they remain somewhat racially isolated in terms of social and psychological functioning. Two objectives were coined to formulate criteria for evaluating progress toward the first priority need.

A. To increase by three percentile points the extent to which anglo students choose black students as associates.

TABLE 1

Choosing Black Students as Associates at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:						
		73	74		75		76	77
Anglo	3 & 6	48	52	*	61	*	63	63
Black	3 & 6	74	74	*	82	*	68	63
Anglo	8	28	29	+	33	-	28	30
Black	8	83	80		75		75	75

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76 or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

Data in Table 1 reflect percentile standings of ethnic groups at the elementary and junior high school levels during five different years. From this data one may conclude that Anglo students have reported choosing Black students much less than Black students have reported choosing members of their own group. It is of note that the pattern of choice at the elementary level has become progressively more "integrated" over the five year period during which data have been collected. (i.e., Anglo students have reported a more frequent choice of Black students, and Black students have reported a less frequent choice of Black students). However, during the 76-77 program the three percentile gain specified in the application was not achieved; therefore, one must conclude that objective I-A was not reached at either the elementary or junior high school level.

B. To increase by three percentile points the extent to which Black students choose Anglo students as associates.

TABLE 2

Choosing Anglo Students as Associates at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	3 & 6	50		57	*	60	*	56	?	81
Black	3 & 6	56		59	*	47	*	50	+	74
Anglo	8	79		76	?	73	?	77		75
Black	8	29		26		32		27		29

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction
? = a statistically significant change (P<.05) of questionable desirability

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76 or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

From data in Table 2 one may conclude that Black students tend to choose Anglo students less than Anglo students choose members of their own group.The difference between groups being the largest at the higher grade levels. A dramatic increase in frequency of choosing Anglos as associates at the elementary level is unexplainable at this time. The most plausible explanation would be a change in data processing techniques, but after much aggravating deliberation the decision was made to present the data as provided in hopes that an explanation would turn up through scrutiny by a wider audience. Blacks did report choosing Anglos more frequently at both the elementary and junior high levels, but not to the three percent criterion level in the junior high group; therefore, one must conclude that objective I-B was achieved only at the elementary level.

II. Improving Teacher Ratings of Student Sociability, Competence, and Emotional Stability/Compliance

The second priority need was to develop and implement multi-ethnic curriculum, because of the way in which teachers in target schools tended to rate members of various ethnic groups. Three objectives were coined to formulate criteria for evaluating progress toward the second priority need.

A. To increase by three percentile points the extent to which Native American students are perceived to be sociable.

(See Table 3 on the next page)

TABLE 3

Teacher Ratings of Student Sociability at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	3 & 6	49		48	*	48	*	46	+	54
Black	3 & 6	53		52	*	56	*	60		59
Native American	3 & 6	42		36	*	45	*	22		43
Asian American	3 & 6	53		40	*	61	*	61		68
Latin/Mexican Amer.	3 & 6	39		46	*	49	*	49		30
Anglo	8	46	+	55		50		52		52
Black	8	55		58		61		52		56
Native American	8	33		24		32		17	+	43
Asian American	8	46		48		58		69		61
Latin/Mexican Amer.	8	52		36		41	+	76		62

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76 or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

From data in Table 3 it may be seen that Native American students were with two exceptions rated to be less sociable in every year than members of other groups. The smaller size of the Native American, Asian, and Latin/Mexican groups lend to some instability; however, the drop in level of rated sociability for Native American students at both elementary and junior high schools from 75 to 76 was fully recovered between 76 and 77. From these data one may conclude that objective II-A was reached at both the elementary and junior high school levels.

B. To increase by three percentile points the extent to which Black and Native American students are perceived to be emotionally stable/compliant.

TABLE 4

Teacher Ratings of Student Emotional Stability/Compliance at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	3 & 6	55	-	51	*	50	*	50		54
Black	3 & 6	43		37	*	45	*	43		47
Native American	3 & 6	56		53	*	41	*	53		46
Asian American	3 & 6	69		63	*	62	*	53	+	74
Latin/Mexican Amer.	3 & 6	67		55	*	44	*	52		52
Anglo	8	54		58		58		59		59
Black	8	34		42		46		43		48
Native American	8	44		46		41		48		65
Asian American	8	60		64		72		68		81
Latin/Mexican Amer.	8	64		66		42		51		63

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

**Footnote same as on chart above.*

From data in Table 4 it may be seen that Black students are generally rated to be less emotionally stable/compliant than their Anglo or Asian counterparts. This is also true for Native American students at the junior high school level. The criterion level for this objective was exceeded in three out of four considerations. From this data one may conclude that objective II-B was partially met at the elementary level and met at the junior high level.

C. To increase by three percentile points the extent to which Black, Native American, and Latin/Mexican American students are perceived to be competent.

TABLE 5

Teacher Ratings of Student Competence at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:				
		73	74	75	76	77
Anglo	3 & 6	57	56	* 52	* 55	57
Black	3 & 6	52	48	* 48	* 51	52
Native American	3 & 6	57	70	* 47	* 39	45
Asian American	3 & 6	77	69	* 80	* 68	76
Latin/Mexican Amer.	3 & 6	83	87	* 49	* 50	40
Anglo	8	54	+ 60	54	57	58
Black	8	35	42	42	37	44
Native American	8	32	33	27	29	41
Asian American	8	70	66	74	67	81
Latin/Mexican Amer.	8	45	45	47	52	37

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76 or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

From Table 5 it may be seen that ratings of competence are generally lower for Black, Native American, and Latin/Mexican American students than for members of the Anglo or Asian American groups. The desired criterion level was exceeded in both elementary and junior high schools for Black and Native American students. However, ratings for Latin/Mexican American students were lower in 77 than in 76; therefore one may conclude that objective II-C was partially achieved at both levels. Observation of the achievement data which follow, substantiate the strong relationship between teacher ratings of competence and performance level of respective groups on academic tests.

III. Improving Academic Achievement

The third priority need was to improve instruction so that performance in reading and arithmetic in each ethnic group would increase by two or more percentile points.

(see Table 6 on next page)

TABLE 6

Academic Achievement* at ESAA Schools

	Ethnic Group	Grade	Percentiles gathered in the fall of: 73		74		75		76***
Total Reading	Anglo	3					(30)	+	(39)
	Black	3					(21)		(26)
	Native American	3					(17)	+	(34)
	Asian American	3					(34)		(49)
	Latin/Mexican Amer.	3					(15)		(24)
Total Arithmetic	Anglo	3					(43)		(48)
	Black	3					(31)		(36)
	Native American	3					(15)		(25)
	Asian American	3					(34)		(47)
	Latin/Mexican Amer.	3					(05)		(23)
Total Reading	Anglo	6	29		27	**	32	-	27(39)
	Black	6	16		18	**	20		18(27)
	Native American	6	18		16	**	25		20(29)
	Asian American	6	27		46	**	62		31(43)
	Latin/Mexican Amer.	6	13		18	**	37		22(32)
Total Arithmetic	Anglo	6	37	-	33	**	33		35(44)
	Black	6	21		22	**	19		21(28)
	Native American	6	21		20	**	23		22(28)
	Asian American	6	44		44	**	60		37(46)
	Latin/Mexican Amer.	6	24		16	**	33	-	16(19)
Total Reading	Anglo	8	37		37	**	38		42(56)
	Black	8	19		19	**	23		25(40)
	Native American	8	21		21	**	20		26(43)
	Asian American	8	43		41	**	42		52(62)
	Latin/Mexican Amer.	8	22		27	**	33		27(44)
Total Arithmetic	Anglo	8	43		43	**	41	+	47(56)
	Black	8	21		21	**	23		23(36)
	Native American	8	25		27	**	18		26(39)
	Asian American	8	32		39	**	32		41(51)
	Latin/Mexican Amer.	8	26		25	**	32		26(39)

+ = a statistically significant change ($P < .05$ in the desired direction
- = a statistically significant change ($P < .05$ in the undesired direction

**Percentiles were derived by entering publisher's Form "Q" norm tables with the mean of raw scores for respective groups. Percentiles for Native American, Asian American, and Latin/Mexican American groups tend to be less stable because of small sample sizes.*

***Achievement percentiles for 73-74 represent all students in the school while achievement percentiles for 75-76 represent only those involved in the ESAA survey. Therefore, comparisons between 74-75 data do not lend themselves to conclusions about statistical significance of change.*

****Percentiles in parentheses are directly from S norms. Achievement percentiles not in parentheses in the 76 column in grades 6 and 8 are derived by scaling what the S performance would have produced in terms of Q norms for comparison with previous years' performance. See Appendix F for the procedure.*

Achievement data for respective groups at three grade levels involved in the survey serve to document nineteen out of a possible thirty instances where criterion levels were met or exceeded. It is of note that all ethnic groups in the third grade met the criteria, while most of the sixth grade groups performed less well than their counterparts the year before. In the fall of 1976 all ethnic groups except the small group of (10) Latin/Mexican American students performed at or above the level of their eighth grade counterparts the previous year. From this data one may conclude the third priority objective was partially reached at both elementary and junior high school levels.

IV. Improving Parent Participation

The fourth priority need was to provide activities that would increase the levels of parent participation in each ethnic group by two percentile points.

TABLE 7

Parent Participation at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	3 & 6	48	+	54	*	50	*	58		55
Black	3 & 6	45		50	*	50	*	54	-	45
Native American	3 & 6	45		37	*	45	*	50		57
Asian American	3 & 6	28		31	*	53	*	54		44
Latin/Mexican Amer.	3 & 6	24		43	*	41	*	63		48
Anglo	8	50		50	+	57		57		58
Black	8	59		57		68		68		66
Native American	8	39		42		50		39		77
Asian American	8	51		54		51		55		50
Latin/Mexican Amer.	8	42		36		48		75		57

+ = a statistically significant change ($P<.05$) in the desired direction
- = a statistically significant change ($P<.05$) in the undesired direction

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76, or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

From Table 7 it may be seen that levels of reported parent participation were generally above the fiftieth percentile. Eighth grade parent participation remained high while levels of reported participation declined at the elementary level.* From this data one may conclude that the objective coined for the fourth priority need was attained only to a very limited extent.

**The parent participation assessment process at the elementary level was dependent on teacher awareness of each parent's involvement in the school. However, program emphasis shifted to have parent conferences in homes, and/or parent involvement in the school (such as parent room or evening activities) that would not be reflected on the survey; therefore, the decline in 1977 may not be serious.*

V. Improving Attitude Toward School and Self-Esteem

The fifth priority need was to provide activities which enhance favorable attitudes toward school and self-esteem. Two objectives were coined to formulate criteria for evaluating progress toward the fifth priority need.

A. To increase by two percentile points the extent to which attitudes toward school are positive.

TABLE 8

Student Reported Attitude Toward School

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	3 & 6	50		49	*	48	*	47		44
Black	3 & 6	52		54	*	49	*	47		52
Native American	3 & 6	52		41	*	56	*	47		33
Asian American	3 & 6	45		44	*	58	*	55		41
Latin/Mexican Amer.	3 & 6	46	+	48	*	39	*	60		64
Anglo	8	51		56		60		58		62
Black	8	48	+	59		57		59		63
Native American	8	53		55		50		57		72
Asian American	8	51		69		63		60		69
Latin/Mexican Amer.	8	61		78	-	53		61		59

+ = a statistically significant change ($P<.05$) in the desired direction
- = a statistically significant change ($P<.05$) in the undesired direction

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76, or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

From data in Table 8 it may be seen that attitudes toward school at the junior high level are all at or above the fiftieth percentile. Four out of five groups at the junior high level attained gains greater than that specified in Objective V-A. Scores at the elementary levels were mixed. From this one may conclude that Objective V-A was partially attained.

B. To increase by two percentile points the extent to which levels of self-esteem are positive

(See Table 9 on next page)

TABLE 9

Student Reported Levels of Self-Esteem at ESAA Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	3 & 6	52		46	*	52	*	50	+	54
Black	3 & 6	52		48	*	58	*	50		54
Native American	3 & 6	41		48	*	58	*	39		52
Asian American	3 & 6	56		50	*	62	*	65		59
Latin/Mexican Amer.	3 & 6	58		47	*	60	*	68		71
Anglo	8	56	-	46	+	58	-	44		45
Black	8	54		45		55		53		51
Native American	8	42		57		57		32		37
Asian American	8	53		52		44		44		42
Latin/Mexican Amer.	8	41		52		44		41		20

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

**Indicates that average scores were computed for different schools in 1973 and 1974 than in 1975, 76, or 77; therefore, statistical analysis is appropriate among schools at the elementary level only between 73-74 or 76-77.*

From data in Table 9 it may be seen that scores from which to infer level of self-esteem are more erratic than scores on other variables. Scores for Anglo students were down in 1974 and 1976. Scores at both junior high and elementary schools were generally above the fiftieth percentile in 1975. Scores tended to decline in 1976, but recovered somewhat in 1977. From this one may conclude that Objective V-B was partially attained at both levels.

VI. Increasing Student Participation and Reducing Perceived Aggression

The sixth and last priority need was to promote cooperative types of student participation at Tacoma's junior high schools. Two objectives were coined to formulate criteria for evaluating progress toward the sixth priority need.

A. The index of student participation attained on the integration survey will be increased by two percentile points.

TABLE 10

Participation in Activities at ESAA Junior High Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	8	55		60		61		59		59
Black	8	63	+	75		70		70	+	78
Native American	8	58		52		65		52		73
Asian American	8	49		60		57		58		76
Latin/Mexican Amer.	8	51	+	87	-	40		84	-	53

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

From data in Table 10 it may be seen that student reported level of participation was above the fiftieth percentile in all groups in 1976 and 1977. Participation was increased in three out of the five groups. The only decrease is in the smallest group. From this data one may conclude that Objective VI-A was partially achieved.

B. The level of aggression as indicated on the integration survey will be decreased by two percentile points.

TABLE 11

Student Reported Receipt of Aggression at ESAA Junior High Schools

Ethnic Group	Grade	Percentiles of data gathered in the spring of:								
		73		74		75		76		77
Anglo	8	58	-	67		63		66	+	58
Black	8	38	-	53		56	+	46		43
Native American	8	41		55		50		64		50
Asian American	8	59		55		51		61		59
Latin/Mexican Amer.	8	54		46		54		42		54

+ = a statistically significant change (P<.05) in the desired direction
- = a statistically significant change (P<.05) in the undesired direction

From data in Table 11 it may be seen that the level of perceived aggression was lower in four out of five groups. From this data it may be concluded that Objective VI-B was largely attained.

APPENDICES

INTEGRATION SURVEY FREQUENCY DISTRIBUTIONS BY OBJECTIVE

OBJECTIVE I-A STUDENT REPORTED- SOCIAL INTERACTION-CHOOSING OF BLACK STUDENTS AS ASSOCIATES
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF FRIDAY, JULY 22, 1977

		1976								1977					
		ETHNIC DISTRIBUTION OF SCORES								ETHNIC DISTRIBUTION OF SCORES					
RAW SCORE	*PCNT-TILE	-ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL	RAW SCORE	*PCNT-TILE	-ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0								0							
100		61	2	4	2	1	70	100		47		1	2	1	51
133		57	3	4	5	1	70	133		51	4	3	5	2	65
166		59	3	2	3		67	166		63	5	4	5	1	78
200		67	19	1	6	3	96	200		57	19	4	5	2	87
233		35	6	2	4	4	51	233		33	9	1	2		45
266		19	12	3	2		36	266		23	11	2	2		38
300		5	18	3	1	2	29	300		16	21	4		1	42
333		2	12	1			15	333		4	11				15
366		2	10		1		13	366		3	17	1	1	1	23
400		1	22	1	2		26	400		1	19		1	1	22
433		1	18			1	20	433			16				16
466		1	13		1		15	466		1	17				18
500			18				18	500			22			1	23
TOTA		310	156	21	27	12	526			299	171	20	23	10	523
MEAN		175.09	347.40	207.66	220.70	233.16	231.16			184.76	349.82	214.69	193.86	249.79	241.52
**PERCENTILE		28	75	36	40	43	43			30	75	38	32	48	46
S.D.		61.48	106.89	89.99	95.21	85.24	111.38			65.09	106.47	72.95	75.62	134.53	112.58
LRGE		100	100	100	100	100	100			100	133	100	100	100	100
HRGE		466	500	400	466	433	500			466	500	366	400	500	500

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO (1976 VS 1977)	3.554	.041	.075	1.188	.124	2.244

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms

Scores for this table were derived from eighth grade student responses. Each student estimated how many of his/her school associates are Black. "Associates" means the other students with whom the respondent eats lunch, hangs around after school, and goes to ballgames and other school activities. A high score means many Black associates among each respective ethnic group.

From data above it may be seen that Anglos reported choosing Blacks as associates more in 1977 than they had in 1976. Native American and Latin/Mexican students also registered an increase of choosing Black students, but none of the increases were statistically significant. Note: Black students continued to choose members of their own group more frequently than they were chosen by members of any other group.

OBJECTIVE I-B STUDENT REPORTED= SOCIAL INTERACTION=CHOOSING OF ANGLO STUDENTS AS ASSOCIATES
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF FRIDAY, JULY 22, 1977

——————1976——————

RAW SCORE	*PCNT-TILE	=ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0							
100		3	17		1		21
133		1	24	1			26
166		2	22	1	2		27
200		3	18	2		1	24
233		8	17	5	2	2	34
266		10	17	2	1	1	31
300		14	16	2	1	2	35
333		24	8	2	2	1	37
366		33	6	1	5		45
400		65	7	2	7	1	82
433		48	2		3	2	55
466		45		1	1		47
500		46		2	2	1	51
TOTA		302	154	21	27	11	515
MEAN		400.37	220.47	299.71	352.77	330.09	338.47
**PERCENTILE		77	27	49	64	58	60
S.D.		80.85	88.06	105.99	101.03	98.30	117.36
LRGE		100	100	133	100	200	100
HRGE		500	433	500	500	500	500

——————1977——————

RAW SCORE	*PCNT-TILE	=ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0							
100			14			1	15
133			22				22
166		5	22		2		29
200		2	27	4	1		34
233		5	24	3	1	1	34
266		7	23	2	1		33
300		35	14	3	1	3	56
333		21	15		3	2	41
366		41	2	3	3	1	50
400		53	4	4	7	1	69
433		41	6	1	1		49
466		48	1		1	1	51
500		40		1			41
TOTA		298	174	21	21	10	524
MEAN		396.23	228.04	312.47	339.38	313.00	333.15
**PERCENTILE		75	29	53	61	53	59
S.D.		75.98	85.70	90.35	96.76	98.24	111.93
LRGE		166	100	200	166	100	100
HRGE		500	466	500	466	466	500

	ANGLO	BLACK	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
F RATIO (1976 VS 1977)	.412	.621	.176	.234	.156	.557

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from eighth grade student responses. Each student estimated how many of his/her school associates are Anglo (white). "Associates" means the other students with whom the respondent eats lunch, hangs around after school, and goes to ballgames and other school activities. A high score means many Anglo associates among each respective ethnic group.

From data above it may be seen that Anglos reported choosing Anglos less frequently in 1977 than they had in 1976, and Black students reported choosing Anglos more frequently in 1977 than they had in 1976. This appears to represent a pattern of less clanishness. None of the changes are statistically significant. Note: Anglo students continued to choose members of their own group more frequently than they were chosen by members of other ethnic groups.

OBJECTIVE II-A TEACHER RATING OF STUDENT SOCIABILITY
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

ETHNIC DISTRIBUTION OF SCORES

		1976						1977					
RAW SCORE	*PCNT-TILE	-ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL	-ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0												
116	1	1	1				2	2					2
150	1	1	1				2						
166	1		2				2	2	2				4
183	2	3		2			5	3	2				5
200	3	1	4	1			6	3	5				8
216	5	10	5		1	1	17	3	1	1	2		7
233	7	6	3	1			10	11	5		1		17
250	10	11	4	5	1		21	8	5				13
266	13	14	7	3	1	1	26	17	9	2		1	29
283	18	17	9	1	1		28	14	5	1	1	1	22
300	25	22	11	3	2		38	18	9	1	3		31
316	31	19	11		1		31	21	11	3			35
333	37	19	15	1			35	15	11	1	1	1	29
350	44	28	7		2		37	21	15	2	1	1	40
366	51	26	14	1	3	2	46	28	16	3	1	1	49
383	59	31	14		1	2	48	26	8	5	2	2	41
400	66	23	16	1	3	3	46	22	23	1	2	1	49
416	73	18	8	1	4	1	32	17	8		1		26
433	79	15	19		1	1	36	21	10		3	1	35
450	84	15	9	1	3	3	31	14	8		2	1	25
466	90	18	9		4	1	32	18	7	1	2		28
483	95	13	4			2	19	10	14				24
500	98	8	6		3	1	18	7	8		2	1	18
TOTAL		319	179	21	31	18	568	299	182	21	24	11	537
MEAN		359.17	359.91	285.47	391.06	406.16	359.91	358.56	366.09	342.42	375.41	[illegible]	361.51
**PERCENTILE		52	53	17	69	76	53	52	56	43	61	62	54
S.D.		76.99	81.47	72.48	77.10	73.16	79.97	79.23	82.28	56.47	86.16	69.38	79.64
LRGE		116	116	183	216	216	116	115	166	216	216	266	115
HRGE		500	500	450	500	500	500	500	500	466	500	500	500

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO (1976 VS 1977)	.009	.514	9.067	.503	1.176	.125

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from teacher ratings of students in grade eight. Teachers rated each student in the sample on a set of six bipolar adjectives describing that student's sociability. The adjectives were:

Sociable - - - - - Unsociable	Cheerful - - - - - Morose	Extroverted - - - - - Introverted
Friendly - - - - - Aloof	Warm - - - - - Cold	Colorful - - - - - Colorless

Data above indicate that eighth grade Black and Native American students in ESAA schools were rated to be more sociable in 1977 than they had been in 1976. The change among Native American students was of such a magnitude as to be statistically significant at the .01 level of confidence. However, Native American students continued to be rated as less sociable than members of other groups.

APPENDIX A (continued)

OBJECTIVE II-B TEACHER RATING OF STUDENT EMOTIONAL STABILITY/COMPLIANCE
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

1976

RAW SCORE	*PCNT-TILE	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0						
100			1		1		2
116	1	1	4				5
133	1	1					1
150	2	2	2				4
166	3	1	2			1	4
183	4	3	3			1	7
200	5	3	2	1	1	1	8
216	6	5	4				9
233	8	4	6	2			12
250	11	6	11	2			19
266	14	6	13	2		1	22
283	17	10	6				16
300	22	18	9		2		29
316	27	9	8	1		1	19
333	32	24	8			2	34
350	37	21	8	2	2	1	34
366	43	17	17				34
383	48	16	11	1	4	2	34
400	55	29	11	2	4	1	47
416	61	14	7	3	3	1	28
433	66	29	8			1	38
450	73	19	10	4	4		37
466	79	23	10		1		34
483	85	27	7		5	2	41
500	94	32	13	2	5	3	55
TOTA		319	181	22	32	18	572
MEAN		387.81	349.48	361.13	411.28	368.22	375.35
**PERCENTILE		59	43	48	68	51	54
S.D.		85.33	98.73	94.25	90.09	110.04	92.93
LRGE		116	100	200	100	166	100
HRGE		500	500	500	500	500	500

1977

RAW SCORE	*PCNT-TILE	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0						
100							
116	1		4				4
133	1		1				1
150	2	2	4				6
166	3		3				3
183	4	3	5				8
200	5	3	2				5
216	6	11	5	1			17
233	8	11	3				14
250	11	9	4		1		14
266	14	11	9	1		1	22
283	17	10	6	1		1	18
300	22	10	11		2		23
316	27	9	11			1	21
333	32	6	6			1	13
350	37	14	10	2			26
366	43	22	10				32
383	48	16	5	2	1		24
400	55	17	14	3		1	35
416	61	13	7	3		1	24
433	66	19	9	2	3		33
450	73	17	11	2	5	1	36
466	79	36	14	3	3	1	57
483	85	25	13		2	3	43
500	94	38	17	2	8		65
TOTA		302	184	22	25	11	544
MEAN		398.25	360.82	401.95	445.83	398.09	382.37
**PERCENTILE		59	48	65	81	63	57
S.D.		92.79	105.58	73.03	68.57	84.21	97.24
LRGE		150	116	216	250	266	116
HRGE		500	500	500	500	483	500

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO (1976 VS 1977)	.003	1.122	2.578	2.528	.594	1.520

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from teacher ratings of students in grade eight. Teachers rated each student on six bipolar adjectives describing this student's emotional stability/compliance. The adjectives were:

Cruel - - - - - Kind
Disobedient - - - - - Obedient
Prone to anger - - - - - Not prone to anger
Difficult to discipline - - - - - Easy to discipline
Obstructive - - - - - Cooperative
Impatient - - - - - Patient

From data above it may be seen that Black, Native, and Asian American students were rated to be more stable/compliant in 1977 than in 1976. However, none of the changes were large and/or consistant enough to be statistically significant.

OBJECTIVE II-C   TEACHER RATING OF STUDENT COMPETENCE
SCHOOL = ALL   TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

1976

RAW SCORE	*PCNT-TILE	ANGLO	BLACK	NAT-AMER	AST-AMER	LAT-AMER	TOTAL
0	0						
100		2	1		1		4
116	1	2	3				5
133	3	6	7			1	14
150	4	1	4	1			6
166	6	3	6	1		2	12
183	8	4	6	1			11
200	10	7	8	4	1	1	21
216	13	6	9				14
233	17	15	8	3	1		27
250	22	16	12	2	1		31
266	26	7	12		1	1	21
283	31	17	7	2			26
300	38	28	17	1	2	1	49
316	46	18	8	1	4	1	32
333	50	8	11			1	20
350	55	16	10		1	1	28
366	59	15	8	1	2		26
383	64	20	6		1	2	29
400	71	32	6	1	2	3	44
416	76	19	5		2		26
433	80	12	6			1	19
450	83	10	4		3		17
466	86	7	3		1		11
483	90	15	7	3	2	2	29
500	96	30	5		5	1	41
TOTAL		316	178	21	30	18	563
MEAN		350.89	301.19	280.71	376.39	338.61	333.52
**PERCENTILE		57	37	29	67	52	50
S.D.		97.99	100.57	104.99	103.57	113.86	103.00
LRGE		100	100	150	100	133	100
HRGE		500	500	483	500	500	500

1977

RAW SCORE	*PCNT-TILE	ANGLO	BLACK	NAT-AMER	AST-AMER	LAT-AMER	TOTAL
0	0						
100			3				3
116	1	4	1				5
133	3	2	3	1			6
150	4		3	1			4
166	6	2					2
183	8	3	6				9
200	10	5	6	2			13
216	13	11	10			2	23
233	17	18	5		1	1	25
250	22	14	11	2			27
266	26	16	6	1	1		24
283	31	9	12			2	23
300	38	23	23	1	3	1	51
316	46	17	6	1	1		25
333	50	12	13	1		2	29
350	55	18	8	7	1	1	35
366	59	13	12	2		1	28
383	64	19	9	2			30
400	71	25	13		2		40
416	76	12	7			1	20
433	80	16	6		3		25
450	83	10	8		1		19
466	86	12	2		1		15
483	90	11	4		3		18
500	96	30	6	1	7		44
TOTAL		302	193	22	24	11	542
MEAN		352.35	320.04	311.18	417.87	302.63	341.66
**PERCENTILE		58	44	41	81	37	54
S.D.		95.98	93.58	85.94	88.10	64.49	96.51
LRGE		116	100	133	233	216	100
HRGE		500	500	500	500	416	500

F RATIO (1976 VS 1977)	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
	.034	3.401	1.088	2.436	.910	1.934

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from teacher ratings of students in grade eight. Teachers rated each student on six bipolar adjectives describing that student's academic competence. The adjectives were:

Dull-minded - - - - - Intelligent
Slow - - - - - Quick
Subject to distraction - - - - - Able to concentrate
Disorganized - - - - - Organized
Poor memory - - - - - Good memory
Quitting - - - - - Persevering

From data above it may be seen that Black and Native American students were rated to be less competent than members of other groups during both years. Black, Native and Asian American students were rated to be more competent in 1977 than they were rated in 1976. Asian American students were rated on the average to be considerably more competent than members of other groups in both years. The "F" ratios indicate that differences between years within any one group were not statistically significant.

APPENDIX A (continued)

OBJECTIVE III CTBS TOTAL ARITHMETIC (RAW SCORES)
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

FALL OF 1975
FORM Q

RAW SCORE	*PCNT= TILE	ETHNIC DISTRIBUTION OF SCORES =ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0	0						
14							
16							
17							
18							
19	1	1	1				2
20	1	1	2				3
21	1	1					1
22	1	2					2
23	1		2				2
24	1	1	1	2			4
25	2	1	2		1		4
26	3	2	3				5
27	4	1	4				5
28	4	2	4				6
29	5	1	4				5
30	6	1	4				5
31	6		3	1			4
32	7	7	3				10
33	9	2	7				9
34	10	2	4		1		7
35	11	3	4	1		1	9
36	12	5	1	3			9
37	14	9	6	2			17
38	17	5	6		1	1	13
39	19	4	7	3			14
40	21	6	7	1	1	1	16
41	22	5	1		2	1	9
42	24	4	4		1		9
43	25	5	4	1			10
44	27	4	4			1	9
45	28	5	6	3		1	15
46	30	4	5	1			10
47	32	6	4		1	1	12
48	34	6	6		2		14
49	36	5	4		1	1	11
50	38	7	2				9
51	40	8	5		1	2	16
52	42	3	4			1	8
53	43	8				1	9
54	45	9	4	1			14
55	47	9	5				14
56	49	8	1				9
57	50	5	5				10
58	52	10	3	1			14
59	53	8	1				9
60	55	5					5
61	56	5	1				6
62	58	7	2		3		12
63	59	8					8

FALL OF 1976
FORM S

RAW SCORE	*PCNT= TILE	ETHNIC DISTRIBUTION OF SCORES =ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0	0						
14			2				2
16		1					1
17			1				1
18		1					1
19	1	3	1				4
20	1		2		1		3
21	1	1	5	1			7
22	1	2	4				6
23	1	2	2				4
24	1	1	2				3
25	2		2			1	3
26	3	1	3	1			5
27	4	4	3			1	8
28	4	2	10				12
29	5	1	4				5
30	6	3	6		1		10
31	6	1	3		1	1	6
32	7	6	7				13
33	9	1	8	1			10
34	10	7	5				12
35	11	1	3		1		5
36	12	3	6	1			10
37	14	7	5	1		1	14
38	17	5	6	1			12
39	19	5	3				8
40	21	3	3				6
41	22	1	3				4
42	24	7	7	1			15
43	25	4	3		1	1	9
44	27	2	3				5
45	28	9	4	2	1		16
46	30	6	2				8
47	32	2	4	1	1		8
48	34	2	3				5
49	36	9	2			1	12
50	38	7	2			1	10
51	40	5	3	1			9
52	42	6	4				10
53	43	4	1	2			7
54	45	3	6	3			12
55	47	8	2	1		1	12
56	49	4	1				5
57	50	6	5				11
58	52		2		1	1	4
59	53	6	1				7
60	55	4	2		2	1	9
61	56	5					5
62	58	6	2				8
63	59	2		1		1	4

CTBS TOTAL ARITHMETIC

FALL OF 1975

FORM Q

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
64	60	7	5		1		13
65	62	5	2				7
66	64	5	8				13
67	65	6	4				10
68	67	4	4		2		10
69	69	3	1	1	2		7
70	71	6	2		1	1	10
71	72	4	3				7
72	74	4	2				6
73	74	4			2		6
74	75	8				2	10
75	77	8			1	1	10
76	78	9	4				13
77	80	6					6
78	81	6	1		1		8
79	82	5	1				6
80	84	6	1				7
81	85	5	1				6
82	86	5	2			1	8
83	87	5	1				6
84	88	9	1		1		11
85	89	2	1		1		4
86	90	4				1	5
87	91	4	1	1	1	1	8
88	92	4	1		2		7
89	93	3	1	1			5
90	94	5	1		1		7
91	95	7					7
92	96	5		1			6
93	97	1			1		2
94	98	3	1				4
95	98	2	1		1		4
96	99	2					2
97	99	2					2
98	99	1					1
TOTAL		366	196	24	33	19	638
MEAN(***)		61.62	49.26	46.91	63.84	57.57	57.26
**PERCENTILE(***)		38	23	20	42	33	32
S.D.		18.57	17.23	19.03	19.37	17.33	19.13
LRGE		19	19	24	25	35	19
HRGE		98	95	92	95	87	98

FALL OF 1976

FORM S

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
64	60	3	1		1		5
65	62	5	1	1			7
66	64	8	4		1		13
67	65	9	1				10
68	67	4					4
69	69	5	3	1			9
70	71	5	2		1		8
71	72	4	2				6
72	74	8	2				10
73	74	6	1		1		8
74	75	2	2			1	5
75	77	8		1			9
76	78	11	1		1		13
77	80	7			2		9
78	81	3			2		5
79	82	8	4	1			13
80	84	3	2				5
81	85	8	6				14
82	86	7	2		1		10
83	87	4	5				9
84	88	9	2				11
85	89	6			2		8
86	90	3	2			1	6
87	91	5					5
88	92	4	4		1		9
89	93	4	1		1		6
90	94	2					2
91	95	4	2				6
92	96	3			2		5
93	97	4	1		1		6
94	98	5	1		1		7
95	98	1	1		1		3
96	99	5					5
97	99	2			1		3
98	99	2					2
		346	211	22	30	13	622
		62.21(64)	48.16(50)	49.77(52)	69.33(71)	50.61(53)	57.13 (59)
		56(42)	40(25)	43(26)	62(52)	44(27)	51(25)
		23.15	20.76	14.88	22.04	18.16	21.43
		16	14	21	20	25	16
		99	95	79	97	86	98

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO(***) (1975 VS 1976)	.165 (2.69)	.335(.15)	.318(1.01)	1.107(1.88)	1.197(.52)	.019(2.31)

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Extracted from Comprehensive Tests of Basic Skills (CTBS) norm tables.

*** CTBS Form S raw scores scaled to Form Q values by way of the procedure outlined in Appendix F. Percentiles in parentheses are CTBS Form Q percentiles extracted on the basis of respective scaled raw scores. F ratios in parentheses are computed on the basis of 1975 Q data vs 1976 S data which was scaled to indicate what students would have attained if they had taken Form Q.

Asian students scored the highest on this variable. None of the F ratios are statistically significant.

OBJECTIVE III
(continued)　　CTBS TOTAL READING (RAW SCORES)
SCHOOL = ALL　　TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

FALL OF
1975
FORM S

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
7	1	1					1
8	1						
14	1	1		1			2
15	1	1	3				4
16	1						
17	1		3				3
18	1			2	1		3
19	1	1	2				3
20	2	2	6	1			9
21	3	2	4	1			7
22	4	1	3	1	1		6
23	5	4	6				10
24	7	2	4		1		7
25	8	1	5		1		7
26	8	1	2	1	1		5
27	10	2	5		1	1	9
28	11	2	2		1		5
29	12	3	7				10
30	13	3	6			1	10
31	15	2	7	1	2	1	13
32	16	3	4			1	9
33	18	4	6	1		1	12
34	20	4	4	2			10
35	21	3	1	1			5
36	22	4	3		1		8
37	24	4	4		1	1	10
38	26	8	7			1	16
39	28	4	4	1	1		10
40	30	6	2		1		9
41	32	11	5	2	2		20
42	34	12	4	2		2	20
43	36	3	4	1			8
44	38	6	5				11
45	40	8	2			1	11
46	42	7	6				13
47	44	10	3		1		14
48	46	6	2				8
49	48	13	2		1	1	17
50	50	9	4	1			14
51	52	7	4	1		1	13
52	55	13	1				14
53	58	13	2	1	2	1	19
54	60	9	1				10
55	62	9	5		2		16
56	64	10	3		2	1	16
57	66	7	2				9
58	68	5	4		1		10
59	70	8	8				16
60	73	8	2		1		11
61	75	8	3				11
62	76	11	2		1		14

FALL OF
1976
FORM S

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
7	1						
8	1	1					1
14	1		1				1
15	1	1	3				4
16	1		1	1			2
17	1				1		1
18	1	1	3				4
19	1	1	3		1		5
20	2	3	3			1	7
21	3		6	1	1		8
22	4	2	5			1	8
23	5		3				3
24	7		3				3
25	8	1	3				4
26	8	2	3	1			6
27	10	1	3				4
28	11	3	5				8
29	12	6	7		1		14
30	13	3	3				6
31	15	3	3			1	7
32	16	5	3	1		1	10
33	18	1	6	3	1	1	12
34	20	2	6				8
35	21	2	7				9
36	22	6	4		1		11
37	24	6	2	1	1		10
38	26	5	5		2		12
39	28	3	3				6
40	30	2	5	1		1	9
41	32	4	4				8
42	34	2	6				8
43	36	3	3			1	7
44	38	5	4	1	1		11
45	40	7	6	1	1		15
46	42	6	3	1	1		11
47	44	9	1				10
48	46	8	5				13
49	48	4		1	1	1	7
50	50	8	7				15
51	52	7	4				11
52	55	8	4	1	1		14
53	58	8	3	2			13
54	60	5	4				9
55	62	7	4			1	12
56	64	8	4		1	1	14
57	66	4	3		1		8
58	68	12	4				16
59	70	7	5				12
60	73	12	5	1		1	19
61	75	2	2		1		5
62	76	10	2	1			13

OBJECTIVE III (continued)
CTBS TOTAL READING

FALL OF 1975
FORM Q

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
63	78	8	2				10
64	80	6	3				9
65	81	7	1	1	1	1	11
66	83	7					7
67	84	10	2		1		13
68	86	8	2			1	11
69	87	1	3			2	6
70	89	6	1		1		8
71	90	4	1	1			6
72	91	6	3				9
73	92	3	2	1			6
74	93	5	1		1		7
75	95	8				1	9
76	96	5			2		7
77	97	6					6
78	98	4			1		5
79	98	2					2
80	99	3	1				4
81	99	2					2
82	99						
83	99	2					2
84	99	1					1
TOTAL		366	196	24	33	19	638
MEAN (***)		53.24	41.57	39.20	47.75	48.00	[illegible].65
**PERCENTILE(***)		41	23	10	32	32	34
S.D.		14.88	15.67	16.36	17.75	15.34	16.30
LRGE		7	15	14	18	27	7
HRGE		84	80	73	78	75	84

FALL OF 1976
FORM S

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
63	78	3	1		1		5
64	80	8	1	2	1		12
65	81	11	3		1		15
66	83	10	3	1	1		15
67	84	9	2				11
68	86	9	1				10
69	87	8	2	1			11
70	89	6	7		2		15
71	90	14			1		15
72	91	9	2				11
73	92	6	3		1		10
74	93	6	1		1	2	10
75	95	4					4
76	96	5	2		1		8
77	97	9					9
78	98	1	1				2
79	98	8					8
80	99	3					3
81	99	2			2		4
82	99	6			1		7
83	99	2					2
84	99	2					2
		347	211	22	30	13	623
		56.63(56)	43.17(42)	45.34(44)	53.79(53)	45.37(44)	51.30(50)
		56(47)	36(23)	39(26)	51(41)	39(26)	47(36)
		15.72	16.11	15.70	13.42	17.87	17.24
		8	14	16	17	22	8
		84	78	69	82	74	84

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO(***) (1975 VS 1976)	8.750 (5.80)	1.028(.07)	2.339(1.51)	1.663(1.66)	.279(.49)	7.959(2.04)

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Extracted from Comprehensive Tests of Basic Skills (CTBS) norm tables.

*** CTBS Form S raw scores scaled to Form Q values by way of the procedure outlined in Appendix F. Percentiles in parentheses are CTBS Form Q percentiles extracted on the basis of respective scaled raw scores. F ratios in parentheses are computed on the basis of 1975 Q data vs 1976 data which was scaled to indicate what students would have attained if they had taken Form Q.

Anglo students scored highest in both years. The gain from 1975 to 1976 in the Anglo group is statistically significant at the .05 level of confidence.

OBJECTIVE IV STUDENT REPORT OF THEIR PARENTS PARTICIPATION
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

——————1976——————

RAW SCORE	*PCNT-TILE	-ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0						
100		84	44	12	12	1	153
133	40	53	24	4	3	5	89
166	56	63	14	1	5	1	84
200	71	31	19		2	1	53
233	81	22	17	3	3	2	47
266	88	10	11		1		22
300	93	10	9	1			20
333	96	8	3		1	1	13
366	98		1		1	1	3
400	99	1	4				5
TOTA		282	146	21	28	12	489
MEAN		162.96	179.91	137.95	160.46	191.33	167.50
**PERCENTILE		57	68	39	55	75	60
S.D.		62.93	78.87	59.80	74.12	85.34	69.68
LRGE		100	100	100	100	100	100
HRGE		400	400	300	366	366	400

——————1977——————

RAW SCORE	*PCNT-TILE	-ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0						
100		64	40	2	7	3	116
133	40	67	31	4	7	1	110
166	56	66	33	4	2	1	106
200	71	46	20	3	3	2	74
233	81	24	9	1	3	2	39
266	88	11	9	2	1		23
300	93	9	11	2			22
333	96	2	4	1			7
366	98		4				4
400	99		1				1
TOTA		289	162	19	23	9	502
MEAN		163.84	176.46	194.42	153.39	162.77	169.57
**PERCENTILE		58	66	77	50	57	61
S.D.		53.96	73.40	70.50	52.82	56.79	61.86
LRGE		100	100	100	100	100	100
HRGE		333	400	333	266	233	400

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO (1976 VS 1977)	.032	.158	7.508	.147	.755	.065

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from eighth grade student responses. Each student estimated how often one of his/her parents comes to school for a conference about his/her classwork; for a parent meeting like PTA, booster club, etc., or to attend a ballgame, play, concert, etc. The higher the score, the more frequent the parent participation.

From data above it may be seen that Anglo and Black students reported similar levels of participation by their parents. Parent participation among Native American parents increased to a statistically significant extent. Black students reported more participation by their parents than was reported in other ethnic groups except for Native Americans in 1977.

APPENDIX A (continued)

OBJECTIVE V-A STUDENT REPORTED= ATTITUDE TOWARD SCHOOL
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF FRIDAY, JULY 22, 1977

1976

RAW SCORE	*PCNT= TILE	=ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0							
100		1	1		1		3
125			2				2
150		1				1	2
175							
200		5	2				7
225		7	5				12
250		10	3	1			14
275		12	5		2		19
300		23	11	3	2		39
325		19	5	6	1	1	32
350		25	13	1	2		41
375		39	19	1	6	3	68
400		49	28	3	4	3	87
425		42	24	1	5	2	74
450		46	21	3	2	1	73
475		24	12	1	2	2	41
500		12	10	3	3		28
TOTA		315	161	23	30	13	542
MEAN		382.93	386.02	381.52	386.66	388.46	384.13
**PERCENTILE		58	59	58	60	61	59
S.D.		73.74	79.29	75.45	82.97	83.30	75.98
LRGE		100	100	250	100	150	100
HRGE		500	500	500	500	475	500

1977

RAW SCORE	*PCNT= TILE	=ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0							
100			1				1
125							
150							
175		1	1				2
200		2	3				5
225		1	2	1	1		5
250		10	3				13
275		12	5				17
300		22	9	1			32
325		18	17			1	36
350		27	10	1	5	3	46
375		36	23	3	2	3	67
400		38	26	4	4	1	73
425		52	30	4	3	1	90
450		44	30		5	1	80
475		36	8	3	2	1	50
500		10	17	4	2		33
TOTA		309	195	21	24	11	550
MEAN		392.23	393.24	415.47	408.33	386.36	394.04
**PERCENTILE		62	63	72	69	59	63
S.D.		67.69	73.45	70.47	61.97	46.58	69.21
LRGE		175	100	225	225	325	100
HRGE		500	500	500	500	475	500

	ANGLO	BLACK	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
F RATIO (1976 VS 1977)	2.690	.772	2.366	1.130	.005	5.079

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from eighth grade student ratings of their school. Each student rated his/her school on the following semantic differential scales:

Good - - - - - Bad
Not a waste of time - - - - - A waste of time
Will help me have a better life - - - - - Will not help me have a better life
Friendly - - - - - Unfriendly

From data above it may be seen that all students reported attitudes toward school which were all above the 50th percentile of the norm group. None of the changes from 1976 to 1977 were statistically significant, but all changes except in the Latin/Mexican American group were in the desired direction.

OBJECTIVE V-B   STUDENT REPORTED- SELF CONCEPT
SCHOOL = ALL   TREATMENT SCHOOLS AT GRADE EIGHT
AS OF TUESDAY, JUNE 28, 1977

1976

RAW SCORE	*PCNT- TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0						
131							
144	1			1			1
156	1						
163	1	2					2
169	1						
175	1	1					1
181	1	1	1				2
188	2	1	1	1			3
194	2	1				1	2
200	4	7	4		1		12
206	7	2	1	1	1	1	6
213	10	6	3				9
219	12	7	5	1			13
225	15	6	1				7
231	17	8	2				10
238	20	9	6	1			16
244	25	16	1	3	3		23
250	32	22	3	1	2		28
256	38	11	8		1		20
263	43	13	3			2	18
269	49	13	7		3		23
275	56	18	5	1	1	1	26
281	62	14	10		2	1	27
288	69	15	6	2	1		24
294	75	16	8				24
300	79	8	7	1			16
306	83	11	4	1	1	1	18
313	86	6	3		1		10
319	90	5	5	1	2		13
325	92	1	2	1			4
331	94	3	5			1	9
338	96	4	5				9
344	97	2	1				3
350	98	3	1				4
356	99	1	2				3
363	99	1					1
TOTAL		234	110	16	19	8	387
MEAN		266.82	276.92	254.87	267.52	264.87	269.19
**PERCENTILE		43	53	32	44	41	46
S.D.		37.39	40.86	49.92	33.70	46.17	39.15
LRGE		163	181	144	200	194	144
HRGE		363	356	325	319	331	363

1977

RAW SCORE	*PCNT- TILE	ETHNIC DISTRIBUTION OF SCORES -ANGLO-	-BLACK-	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
0	0						
131			1				1
144	1	1					1
156	1		1				1
163	1						
169	1	1	1			1	3
175	1	1	1				2
181	1	2					2
188	2	2	2	2			5
194	2	3	1				4
200	4	5	2			1	8
206	7	3	1				4
213	10	2		1			3
219	12	3	1				4
225	15	7	1		1	1	10
231	17	7	3		1		11
238	20	12	4	1			17
244	25	12	3	1	2		18
250	32	7	6	1	2	1	17
256	38	13	8		1	1	23
263	43	15	6	1	3		25
269	49	16	6	2	2	1	27
275	56	17	8	2	2		29
281	62	23	6		2		31
288	69	15	7		1		23
294	75	6	2		2		10
300	79	15	7				22
306	83	11	7	1	1		20
313	86	8	6			1	15
319	90	9	2	1			12
325	92	6	2				8
331	94	1	3				4
338	96	3	2				5
344	97	2	2	1			5
350	98		3				3
356	99		1				1
363	99		1				1
		228	107	14	20	7	376
		268.67	274.69	260.07	266.04	260.29	269.39
		45	51	37	42	20	46
		36.72	44.52	45.31	21.51	47.24	39.17
		144	131	188	225	169	131
		344	363	344	306	313	363

	ANGLO	BLACK	NAT-AMER	ASI-AMER	LAT-AMER	TOTAL
F RATIO (1976 VS 1977)	.287	.147	.088	.027	1.036	.004

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

OBJECTIVE VI-A STUDENT REPORTED= PARTICIPATION (ATTENDING)
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF FRIDAY, JULY 22, 1977

1976

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES =ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0							
100		25	11	1	2		39
133		24	4	6	3	1	38
166		38	15	2	5		60
200		41	15	3	2	1	62
233		40	21	2	5	1	69
266		40	28	2	5	3	78
300		23	26	2	1		52
333		23	12		3	2	40
366		23	13	2		4	42
400		5	5	1	2		13
TOTA		282	150	21	28	12	493
MEAN		230.98	253.44	217.14	229.39	291.16	238.60
**PERCENTILE		59	70	52	58	84	63
S.D.		80.46	77.37	89.18	82.85	76.58	80.83
LRGE		100	100	100	100	133	100
HRGE		400	400	400	400	366	400

1977

RAW SCORE	*PCNT-TILE	ETHNIC DISTRIBUTION OF SCORES =ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
0							
100		21	6	2	3	1	33
133		23	8			2	33
166		47	13	2	2		64
200		39	14			1	54
233		35	17	3	3	1	59
266		50	28	3	4	3	88
300		33	28	5	4	2	72
333		28	17	4	4		53
366		12	21	1	3		37
400		4	12		1		17
TOTA		292	164	20	24	10	510
MEAN		230.93	271.81	261.34	267.70	219.69	246.79
**PERCENTILE		59	78	73	76	53	67
S.D.		75.52	80.06	76.66	87.57	73.97	79.79
LRGE		100	100	100	100	100	100
HRGE		400	400	366	400	300	400

	ANGLO	BLACK	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
F RATIO (1976 VS 1977)	.000	4.259	2.883	2.621	4.898	2.601

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores for this table were derived from eighth grade student responses. Each student reported how often he/she goes to ballgames and other sports at their school; to school parties, dances, etc.; and to meetings of school clubs. The higher the score, the more frequent the student's participation in these kinds of activities.

From data above it may be seen that students indicated that they were participating in school activities more frequently than members of the norm group (i.e., all averages are above the fiftieth percentile). Two changes were statistically significant. Black students reported significantly more participation in 1977 than in 1976, while the small group of Latin/Mexican Americans reported less.

OBJECTIVE VI-B STUDENT REPORTED= AGGRESSION RECEIVED
SCHOOL = ALL TREATMENT SCHOOLS AT GRADE EIGHT
AS OF FRIDAY, JULY 22, 1977

1976

RAW SCORE	*PCNT= TILE	=ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
		ETHNIC DISTRIBUTION OF SCORES					
0							
100		53	52	4	5	4	118
133		37	19	3	4	2	65
166		49	21	2	4	1	77
200		30	18	4	5	2	59
233		39	8	3	3	1	54
266		21	7	1	3	1	33
300		16	9	2	1		28
333		22	1	2	1		26
366		10	2				12
400		7	1		1		9
TOTA		284	138	21	27	11	481
MEAN		202.86	164.52	198.19	193.55	157.36	190.09
**PERCENTILE		66	46	64	61	42	60
S.D.		83.83	71.37	77.04	77.33	59.65	80.96
LRGE		100	100	100	100	100	100
HRGE		400	400	333	400	266	400

1977

RAW SCORE	*PCNT= TILE	=ANGLO=	=BLACK=	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
		ETHNIC DISTRIBUTION OF SCORES					
0							
100		57	66	3	6	2	134
133		52	27	6	3	2	90
166		55	22	1	2	2	82
200		33	14	8	2	1	58
233		25	10		4		39
266		21	7	1	1	3	33
300		9	7	1	3		20
333		17	2		1		20
366		7	2				9
400		5	2				7
		281	159	20	22	10	492
		187.47	154.06	171.50	189.18	179.59	177.23
		58	43	50	59	54	53
		78.49	71.55	54.38	78.56	66.83	76.21
		100	100	100	100	100	100
		400	400	300	333	266	400

	ANGLO	BLACK	NAT=AMER	ASI=AMER	LAT=AMER	TOTAL
F RATIO (1976 VS 1977)	5.071	.603	1.627	.038	.648	6.511

* ESTABLISHED ON 1976 DISTRIBUTION OF ALL TACOMA STUDENTS TESTED AT THIS GRADE LEVEL.

** Computed in relation to Program Research in Integrated Multi-Ethnic Education (PRIME) norms.

Scores in this table were derived from eighth grade student responses. Each student estimated how often other students picked on him/her at school, tried to take money from him/her, or tried to hassle him/her at school. The higher the score, the more frequent the aggression.

From data above it may be seen that reported receipt of aggression was less in 1977 than in 1976 for Anglo, Black, Native American, and Asian students, but more in 1977 than 1976 in the Latin/Mexican group. The decrease of perceived aggression among Anglo students is significant at the .05 level of confidence.

APPENDIX B

TREND LINES FOR EVALUATING INTEGRATED EDUCATION IN TACOMA

with variables
identified by the
western regional
school desegregation
projects

uc/riverside

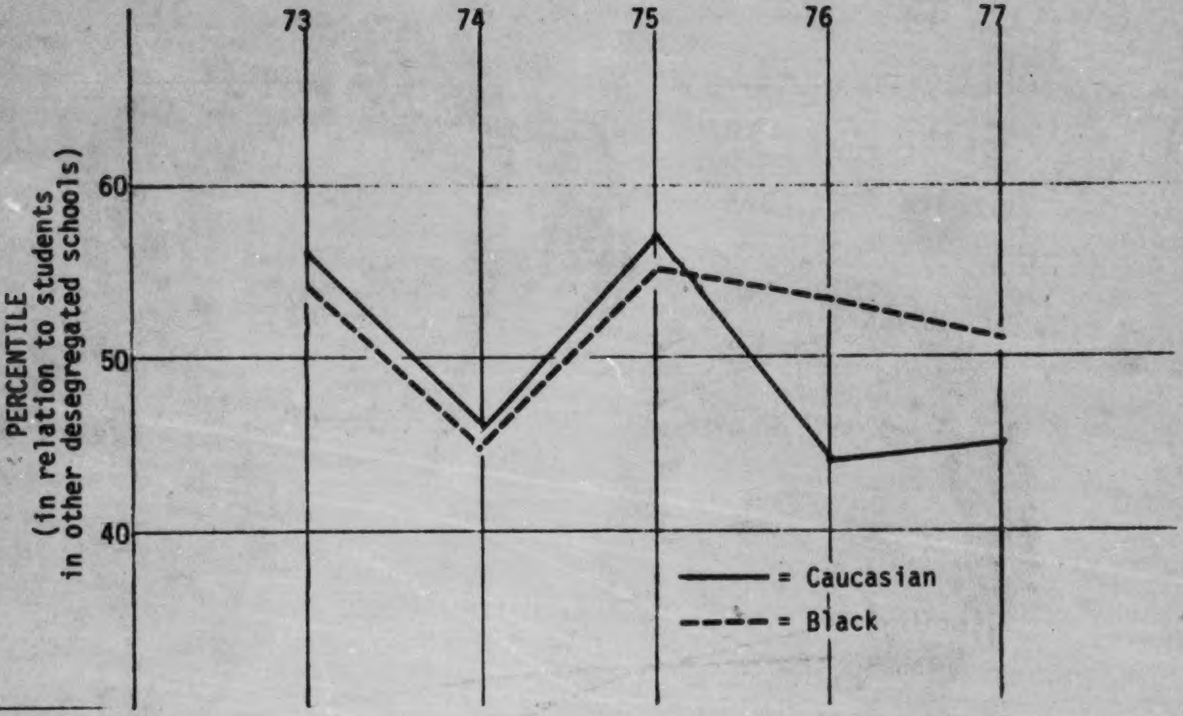
A culturally integrated school...is a school in which children of all ethnic groups not only have an opportunity to acquire the knowledge, skills, and behavior necessary to participate in the mainstream of American life, But have in fact, acquired that knowledge, those skills, and those behavior patterns.

Data has been collected annually for the past five years on variables which reflect integration climate. A brief overview of selected variables is provided on the attached pages. Data and interpretations are presented on each variable in turn according to the order of priority established for the 1977-78 Emergency School Aide Act program (highest priority first).

Office of Research and Evaluation

SELF-ESTEEM

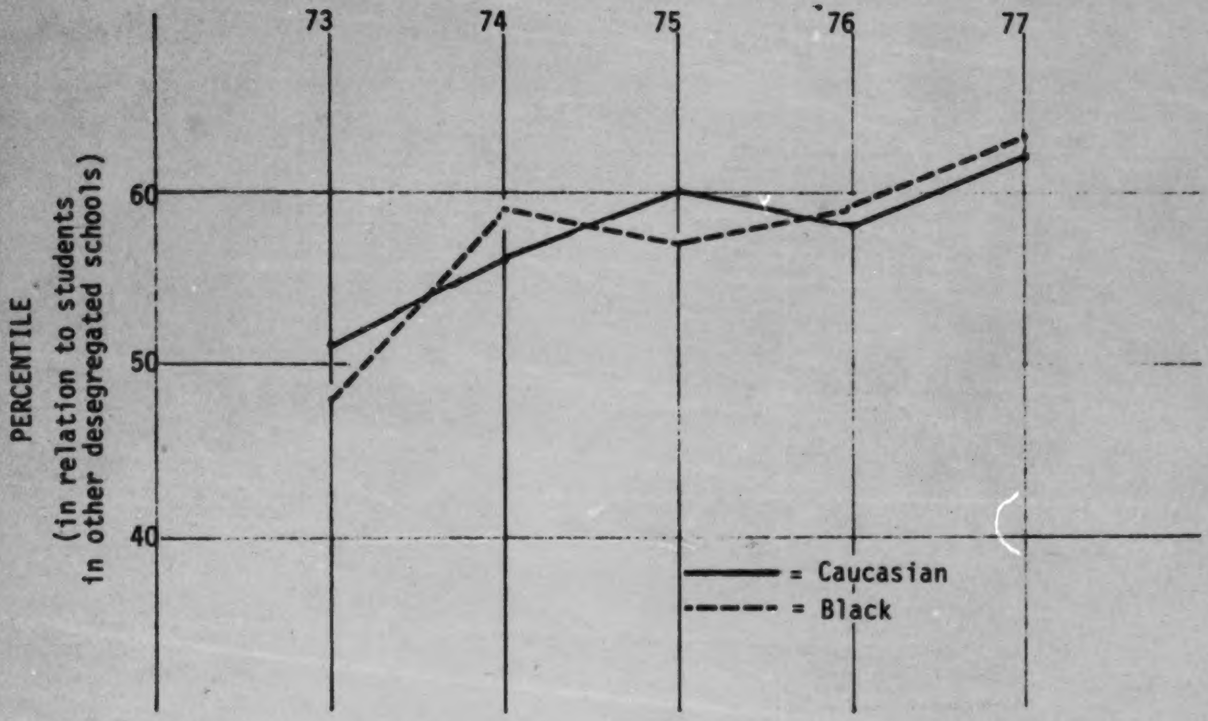
(at Grade 8 - in the spring of the following years)



Variations from year to year raise perplexing questions about the meaning of student responses to self-esteem items (e.g., How often do you do good classwork?, How often to you feel worried when the teacher asks you a question?, etc.). Reasons for relatively high average scores in both ethnic groups in the spring of 1973 and 1974 can only be speculated about. One may conclude from this data that levels of Black and Caucasian reported self-esteem have been similar, and the general level of self-esteem in Tacoma has remained average as compared to other desegregated school districts.

ATTITUDE TOWARD SCHOOL

(at Grade 8 - in the spring
of the following years)



Data on attitude toward school reflects a relatively consistent upward trend since 1973. Student responses for Black and Caucasian students have been equally positive when they responded to questionnaire items:

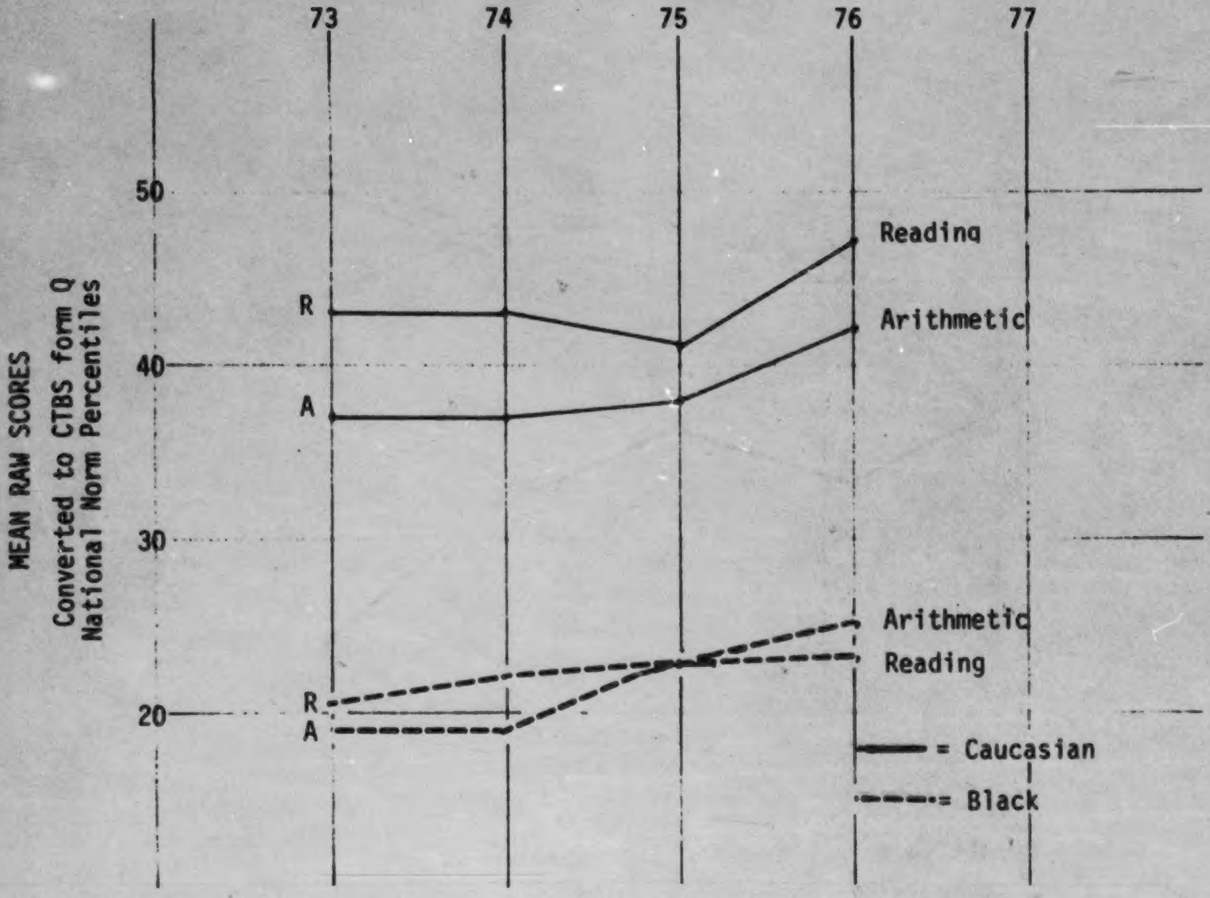
YOUR SCHOOL

Good _ _ _ _ _ _ _ _ Bad
Not a waste of time _ _ _ _ _ _ _ _ A waste of time
Will help me have a better life _ _ _ _ _ _ _ _ Will not help me have a better life
Friendly _ _ _ _ _ _ _ _ Unfriendly

The general level of attitude toward school has remained well above the average for desegregated schools since 1973.

ACHIEVEMENT on Standardized Tests

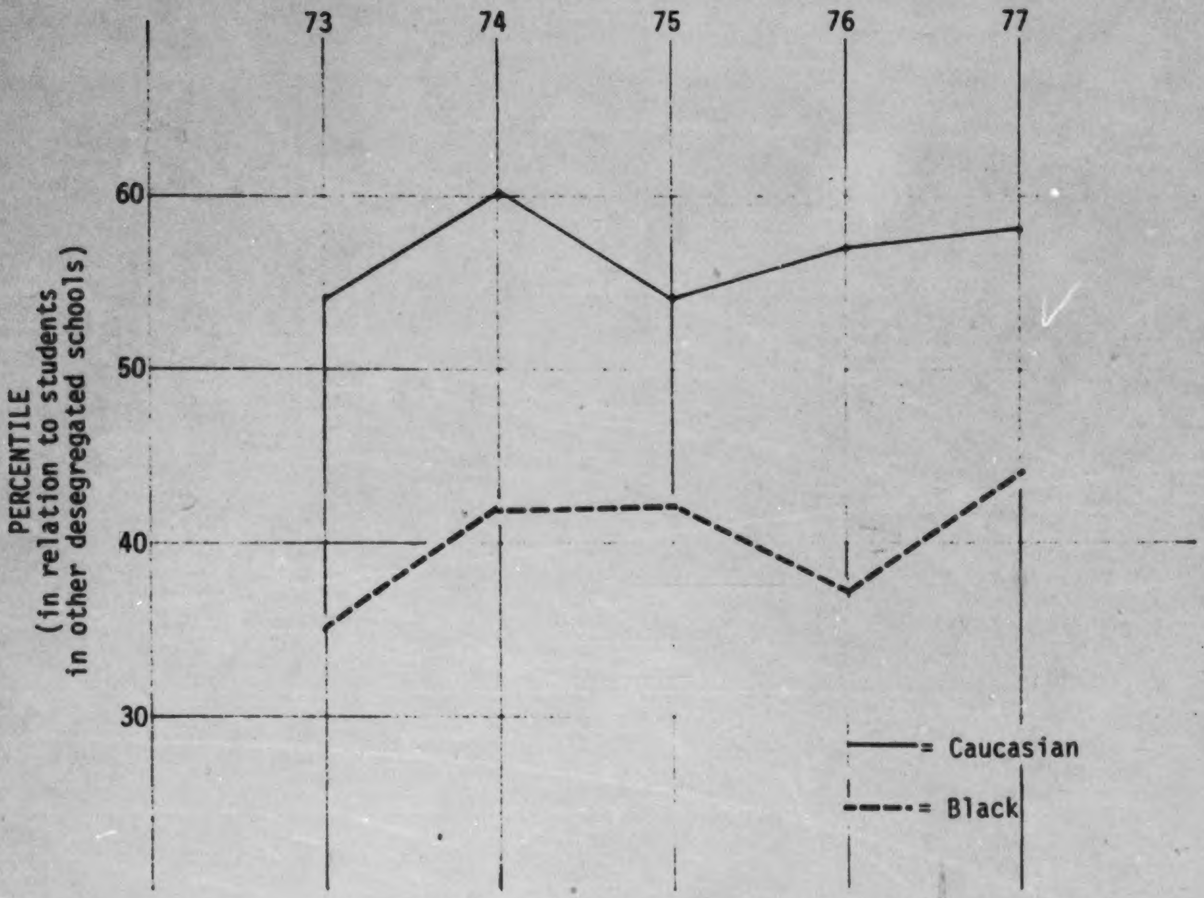
(at Grade 8 - in the fall
of the following years)



Achievement data follows a gradual positive trend in both groups. The average score for Black students is consistantly below that of Caucasian students. The differences between groups are similar to those in other students of ethnic differences, such as the Colemen report or the national ESAA evaluation. General levels of performance for both groups are below the national norm. (It is well to note that the more current CTBS form S norm places the Caucasian group above the national average in 1976 in both reading and math.)

TEACHER RATINGS OF STUDENT COMPETENCE

(at Grade 8 - in the spring of the following years)



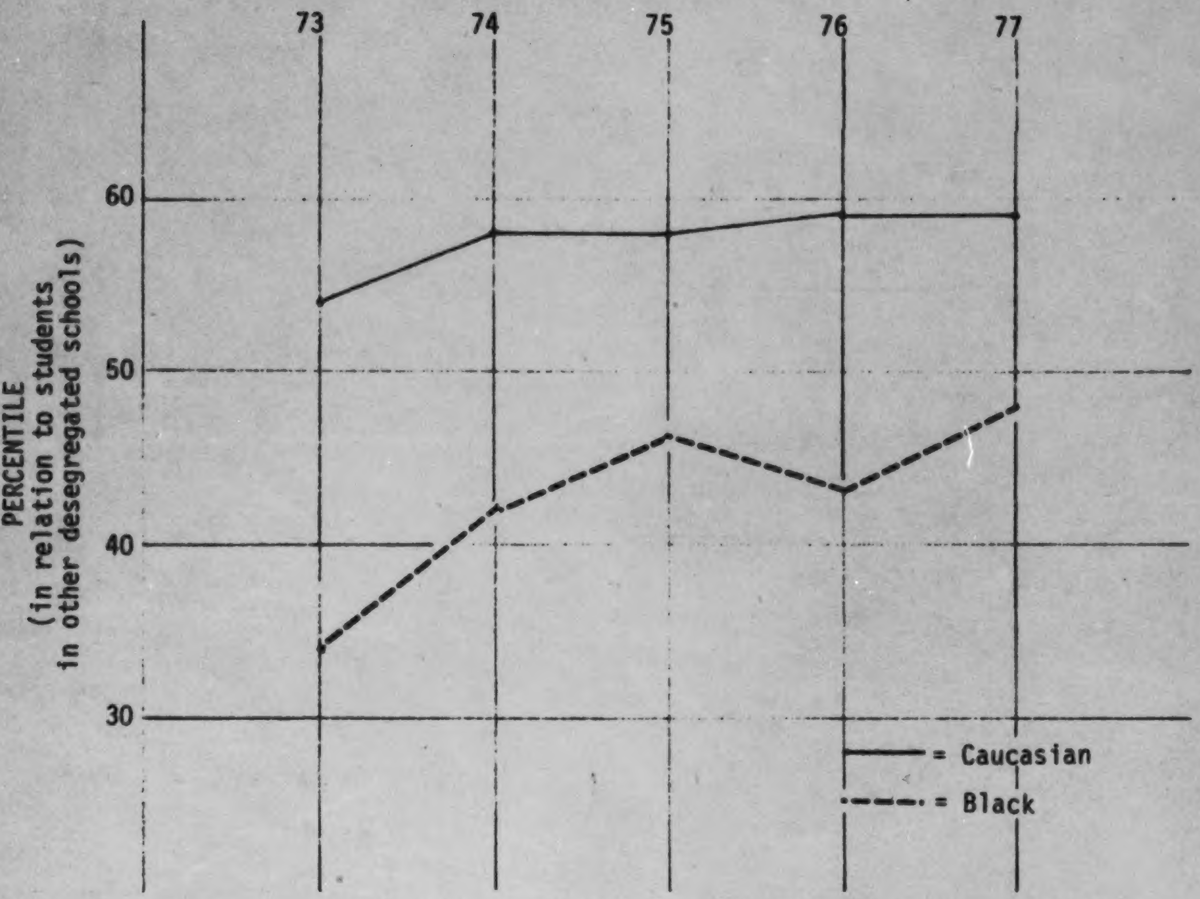
Teacher ratings of student competence scores were obtained for students in the sample on the following semantic differential scale:

Able to concentrate - - - - - Subject to distraction
Organized - - - - - Disorganized
Good memory - - - - - Poor memory
Persevering - - - - - Quitting
Intelligent - - - - - Dull-minded
Quick - - - - - Slow

Differences between ratings for the two groups tended to follow actual performance of the respective groups on standardized achievement tests.

TEACHER RATING OF STUDENT EMOTIONAL STABILITY/COMPLIANCE

(at Grade 8 - in the spring
of the following years)



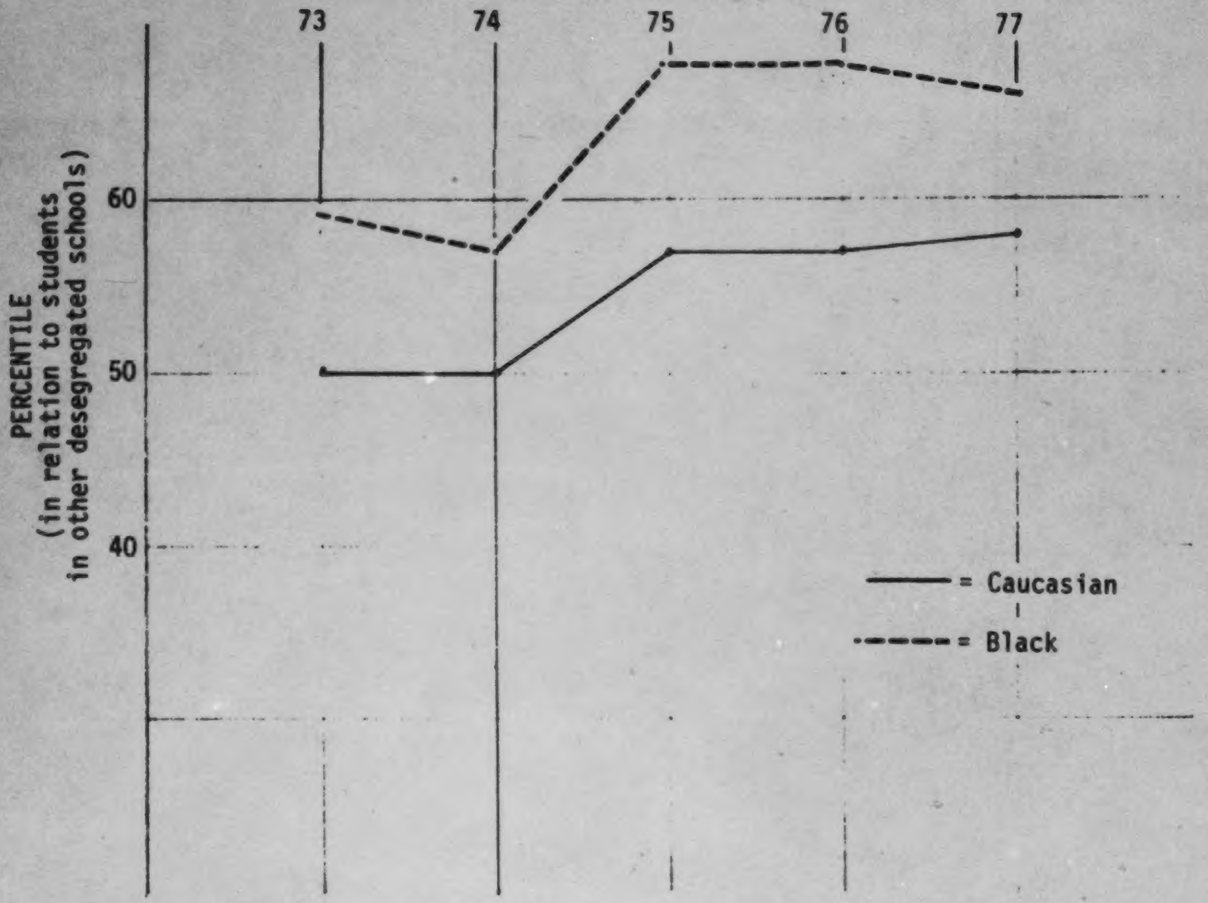
Teacher ratings of student emotional stability/compliance scores were obtained for students in the sample on the following semantic differential scale:

Not prone to anger - - - - - Prone to anger
Easy to discipline - - - - - Difficult to discipline
Cooperative - - - - - Obstructive
Patient - - - - - Impatient
Obedient - - - - - Disobedient
Kind - - - - - Cruel

Differences between groups tended to follow actual performance of respective groups on standardized tests. Both groups were rated more positively in successive years.

STUDENTS' REPORTING ABOUT THEIR PARENTS PARTICIPATION

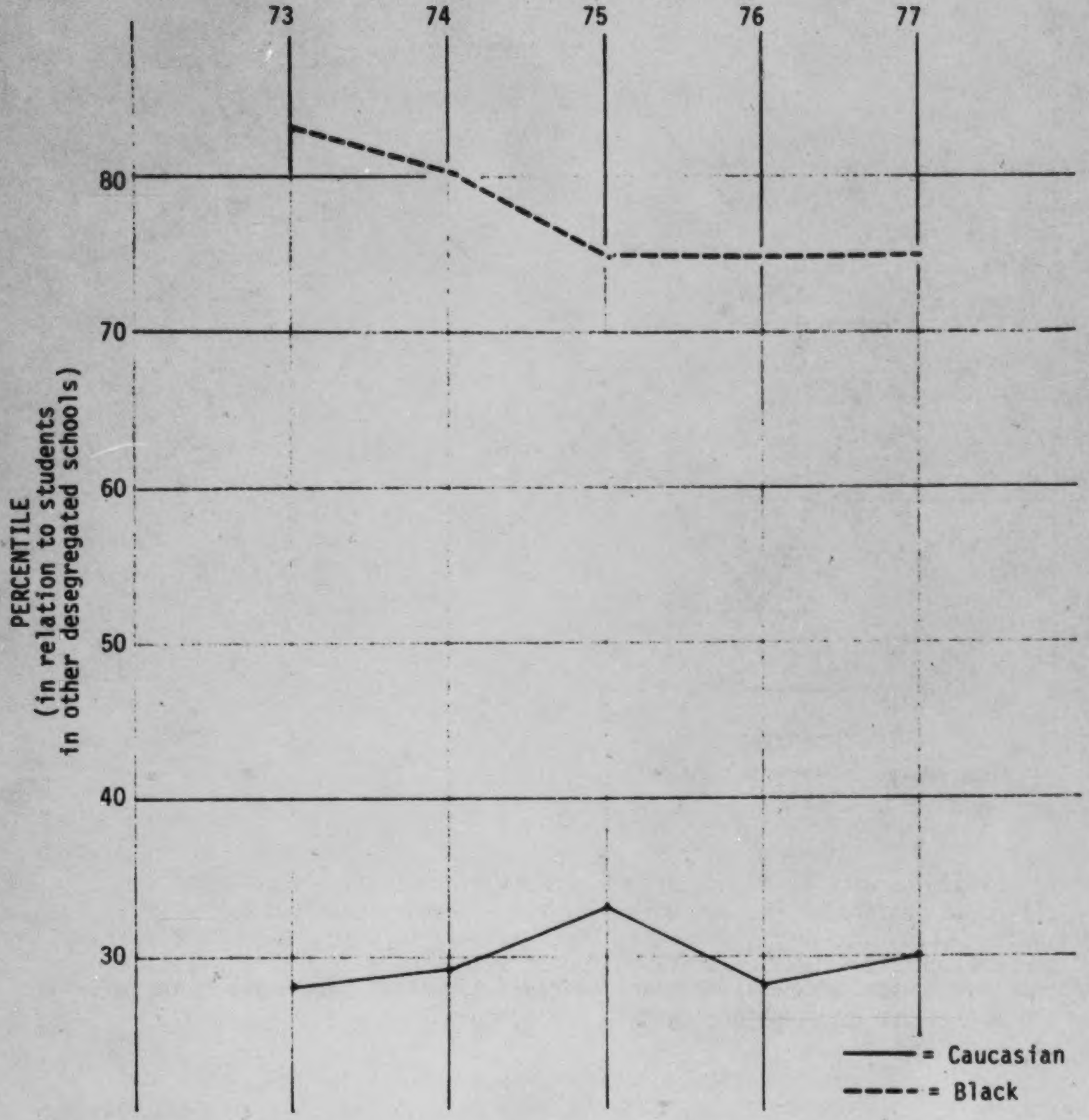
(at Grade 8 - in the spring of the following years)



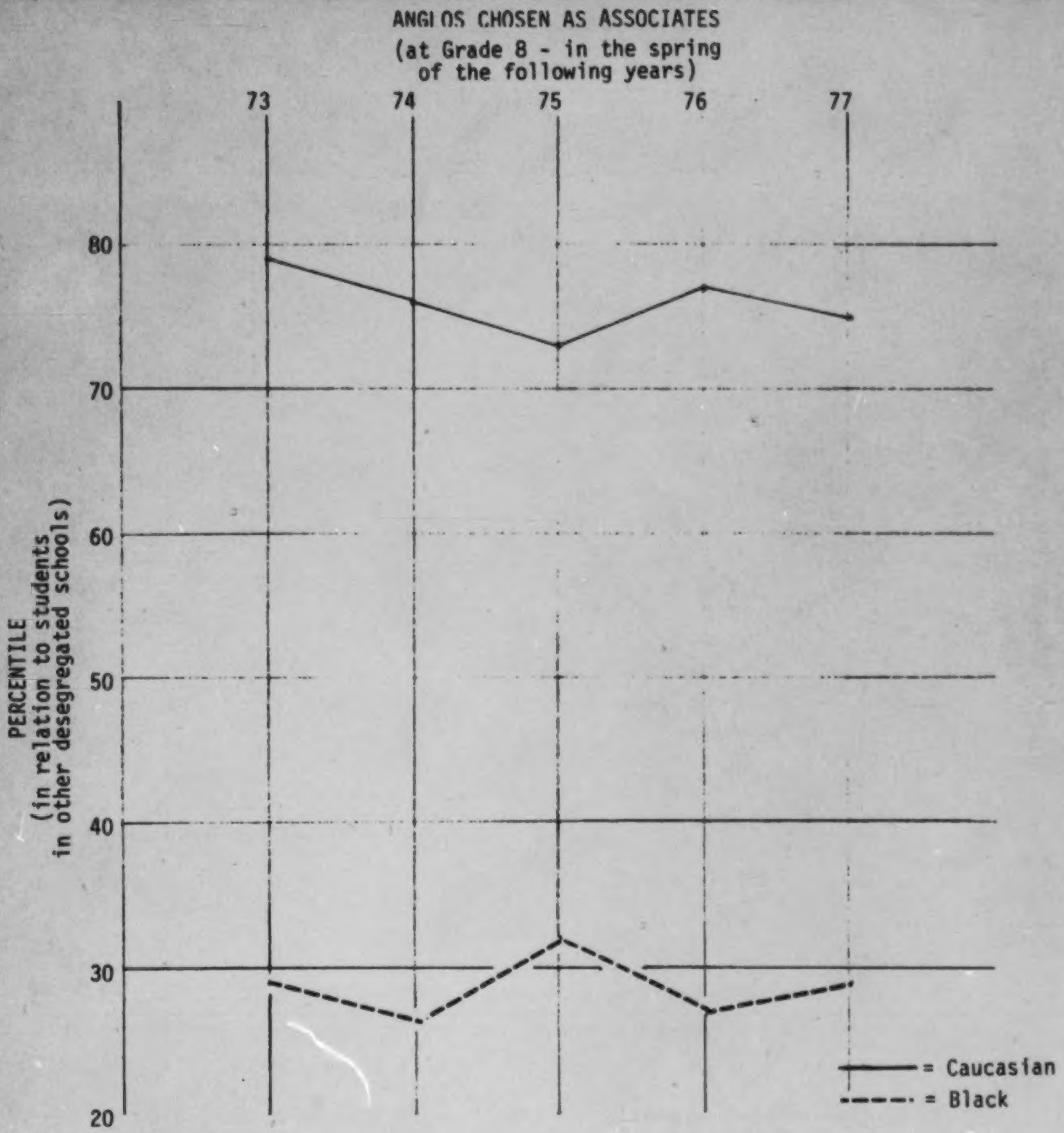
Students were asked how often one of their parents had come to school (1) for a conference on classwork, (2) for a parent meeting like P.T.A., booster club, or other things like that, and (3) to attend a ballgame, play, concert, or activity like that? Reported levels of parent participation either increased or remained high. Current levels of parent participation are well above average for desegregated schools.

BLACKS CHOSEN AS ASSOCIATES

(at Grade 8 - in the spring
of the following years)



From data on the last two pages it may be seen that each group tended to choose members of its own group. In successive years there has been some reduction in the extend to which members chose their own group.



Students were asked to:

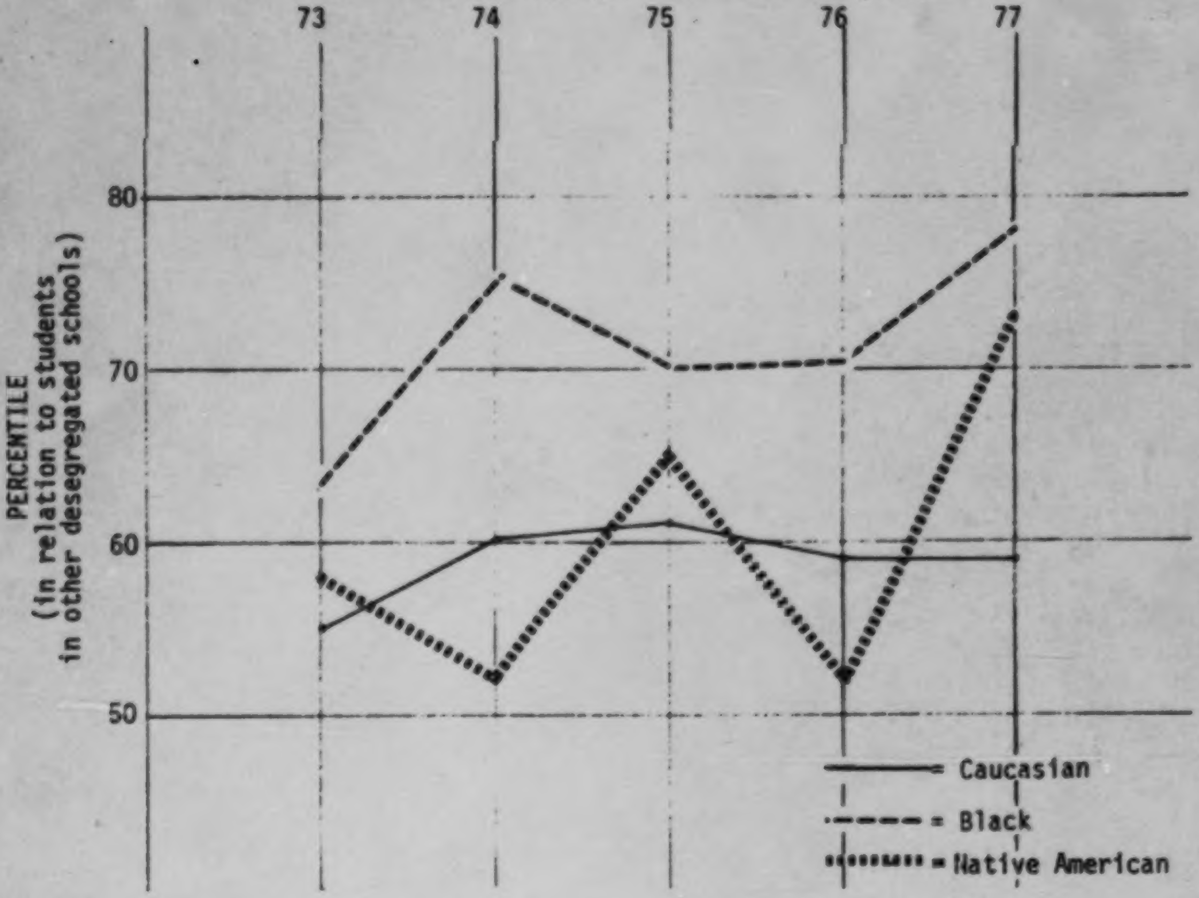
Think about the other students with whom you usually eat lunch:

1. How many are white?
2. How many are black?

The same questions were raised again in relation to "the students you hang around with after school" and "the students with whom you go to ballgames and other school activities." Scoring these questions by ethnicity provides data for the table above and the following page.

STUDENT PARTICIPATION

(reported by students in Grade 8 in the spring of the following years)



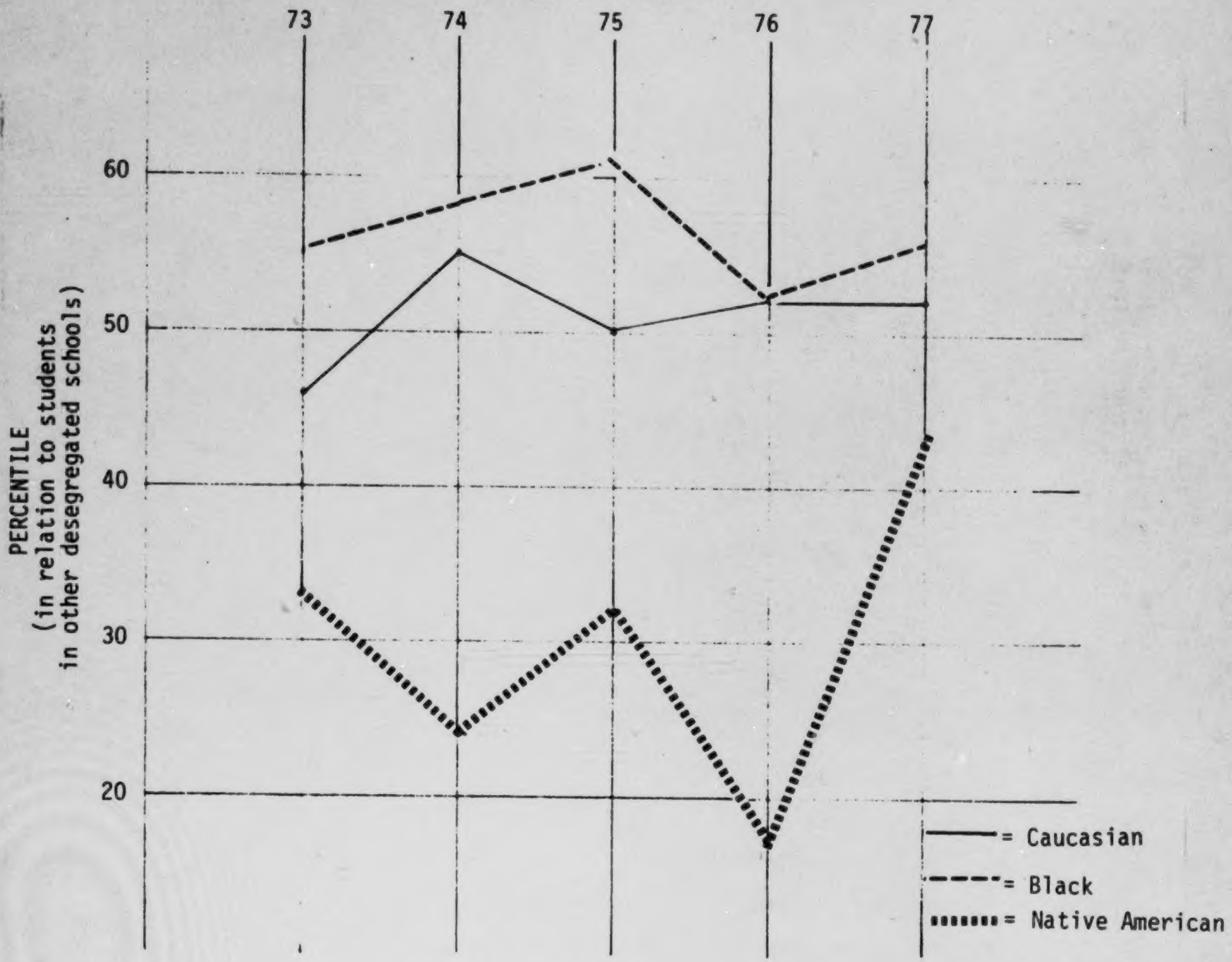
Students were asked:

1. How often do you go to ballgames and other sports at your school?
2. How often do you go to school parties, dances, and things like that?
3. How often do you go to meetings of school clubs?

The data reflect increasing levels of participation for all groups. Blacks reported higher levels of participation than their caucasian counterparts. All groups reported participating much more than students in other desegregated schools.

6

TEACHER RATINGS OF STUDENT SOCIABILITY (at Grade 8 - in the spring of the following years)

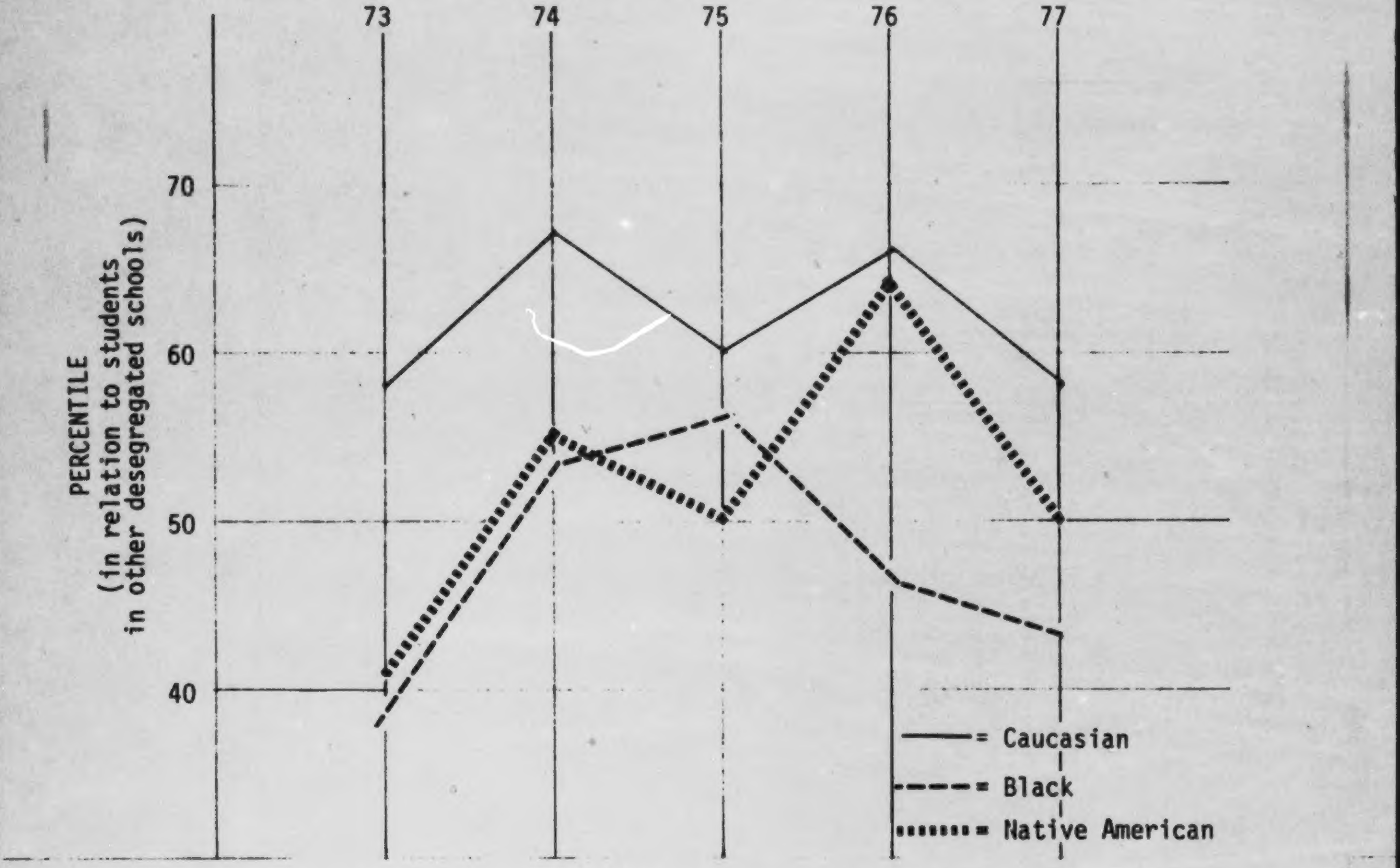


Teacher ratings of student sociability were obtained for students in the sample on the following semantic differential scale:

Sociable - - - - - Unsociable
Friendly - - - - - Aloof
Cheerful - - - - - Morose
Warm - - - - - Cold
Extroverted - - - - - Introverted
Colorful - - - - - Colorless

Black students tended to be rated as most sociable while Native American students were consistently rated to be least sociable. Ratings of Native Americans tend to be less stable because of small sample size, but the same general pattern is found at the elementary level.

STUDENT PERCEIVED AGGRESSION
(at Grade 8 - in the spring
of the following years)



Students were asked:

1. How often do other students pick on you at school?
2. How often do other students try to extort or take money from you?
3. How often do other students try to hassle you at school?

Data above reflect an increase of reported aggression from 1973 to 1974 and a decrease from 1976 to 1977 in all groups.

APPENDIX C

Central Tendency Trends at Elementary and Junior High School Levels

PERCENTILE STANDINGS IN RELATION TO ESAA OBJECTIVES
FOR ANGLO (A), BLACK (B), AND NATIVE AMERICAN (N) STUDENTS

(In order of 1977-78 priority)		TREATMENT SAMPLE									
		ELEMENTARY					JUNIOR HIGH				
OBJECTIVE VARIABLES	YEAR:	73	74	75	76	77	73	74	75	76	77
1. Self Esteem	A	52	46	* 52	* 50	+ 54	56	- 46	+ 57	- 44	45
	B	52	47	* 58	* 50	54	54	45	55	53	51
2. Attitude Toward School	A	50	49	* 48	* 47	44	51	56	60	58	62
	B	52	54	* 49	* 47	52	48	+ 59	57	59	63
3. Achievement: CTBS Q Norms ***(CTBS S Norms)		(Grade 6 only)									
Total Arithmetic	A	29	27	* 32	- 27(39***)		37	37	** 38	+ 42(56***)	
	B	16	18	* 20	18(27***)		19	19	** 23	25(40***)	
Total Reading	A	37	33	* 33	35(44***)		43	43	** 41	+ 47(56***)	
	B	21	22	* 19	21(28***)		20	22	** 23	23(36***)	
4. Competence	A	57	54	* 52	* 55	57	54	+ 60	54	57	58
	B	52	46	* 48	* 51	52	35	42	42	37	44
	N	57	70	* 47	* 39	45	32	33	27	29	41
5. Emotional Stability/ Compliance	A	55	- 51	* 50	* 50	54	54	58	58	59	59
	B	43	36	* 45	* 43	47	34	42	46	43	48
	N	56	53	* 41	* 52	46	44	46	41	48	65
6. Parent Participation	A	48	+ 55	* 50	* 58	55	50	50	+ 57	57	58
	B	45	52	* 50	* 54	- 45	59	57	68	68	66
7. Anglos are Chosen	A	50	? 57	* 60	* 56	? 81	79	76	? 73	? 77	75
	B	56	59	* 47	* 50	+ 74	29	26	32	27	29
8. Blacks are Chosen	A	48	52	* 61	* 63	63	28	29	+ 33	- 28	30
	B	74	74	* 82	* 68	63	83	80	75	75	75
9. Student Participation	A	(Junior High Only)					55	60	61	59	59
	B						63	+ 75	70	70	+ 78
10. Sociability	A	49	48	* 48	* 46	+ 54	46	+ 55	50	52	52
	B	53	51	* 56	* 60	59	55	58	61	52	56
	N	42	36	* 45	* 22	43	33	24	32	17	+ 43
11. Perceived Aggression	A	(Junior High Only)					58	- 67	60	66	+ 58
	B						38	- 53	56	+ 46	43

+ = a statistically significant shift in the desired direction
- = a statistically significant shift in the undesired direction
? = a statistically significant shift of questionable desirability

* Schools included in the treatment sample changed between 1974-75 and 1975-76; therefore, statistical analysis of the difference between those years is not appropriate.

** Achievement percentiles for 73-74 represent all students in the school while achievement percentiles for 75-76 represent only those involved in the ESAA survey. Therefore, comparisons between 74-75 data do not lend themselves to conclusions about statistical significance of change.

*** Percentiles in parentheses are directly from S norms. Achievement percentiles in the 76 column are derived by scaling what the S performance would have produced in terms of Q norms for comparison with previous years' performance.

BLA/le 10/77

APPENDIX D

Central Tendency Trends for Each Junior High School

GRADE EIGHT PERCENTILE STANDINGS OF ANGLO (A) AND BLACK (B) STUDENTS ACCORDING TO ESAA INTEGRATION SURVEY AND ACHIEVEMENT DATA

OBJECTIVE VARIABLES	YEAR:	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77
		TREATMENT SCHOOLS																								
		A					B					C					D					E				
1. Self-Esteem	A	46	43		35	34	66	55	56	34	59	54	53	53	42	45	62	42	58	50	49	62	48	56	44	43
	B	46	28		71	74	66	63	58	52	54	54	41	39	39	44	58	40	62	70	50	54	38	41	30	54
2. Attitude Toward School	A	34	54	52	52	50	70	70	76	69	78	46	45	50	+ 63	66	58	51	+ 66	62	61	62	59	60	- 42	+ 59
	B	24	13	+ 51	51	+ 74	70	73	63	62	65	24	+ 50	63	+ 75	73	62	69	68	62	69	42	60	42	28	44
3. Achievement: CTBS Q Norms *(CTBS S Norms)																										
Total Arithmetic	A	26	32	** 33	36(54*)		33	33	** 33	+ 41(58*)		39	37	** 30	31(50*)		31	+ 36	** 31	25(51*)		45	42	** 40	43(59*)	
	B	15	17	** 24	21(38*)		29	24	** 23	+ 36(54*)		25	28	** 22	17(33*)		10	19	** 17	14(37*)		14	16	** 18	30(49*)	
Total Reading	A	35	37	** 36	41(51*)		29	30	** 41	43(53*)		47	51	** 47	43(53*)		45	45	** 34	39(50*)		51	49	** 43	53(60*)	
	B	17	14	** 32	26(39*)		26	22	** 21	+ 30(43*)		29	26	** 26	22(34*)		17	22	** 18	19(31*)		14	19	** 25	30([illegible]*)	
4. Competence	A	38	+ 57	65	55	64	46	55	53	44	59	54	73	58	59	56	50	+ 63	54	44	48	58	59	57	66	60
	B	30	32	46	44	43	58	56	37	42	46	24	57	35	48	50	24	34	41	33	44	28	30	50	- 17	+ 37
5. Emotional Stability/ Compliance	A	30	51	64	54	58	46	45	54	59	70	50	65	52	62	60	46	+ 61	61	47	44	54	48	+ 64	62	67
	B	28	45	25	37	40	38	42	42	42	53	24	+ 52	34	40	49	30	30	36	45	49	28	25	+ 56	36	+ 53
6. Parent Participation	A	50	62	51	56	58	42	33	+ 71	54	58	50	52	58	59	54	46	48	55	60	59	58	- 44	48	41	56
	B	66	30	62	50	58	66	45	+ 69	88	84	54	75	57	81	73	86	68	75	74	64	42	57	62	49	41
7. Anglos are Chosen	A	76	74		72	64	66	71	69	76	73	82	78	? 65	? 74	78	72	71	68	73	70	84	85	83	84	82
	B	54	26		29	41	28	21	27	35	- 21	28	35	51	- 31	31	30	30	32	25	29	24	26	33	25	25
8. Blacks are Chosen	A	30	35		31	40	38	31	+ 40	31	32	22	26	+ 44	- 31	29	30	35	34	- 26	+ 33	22	18	+ 23	22	24
	B	78	62		58	53	84	82	80	80	84	82	79	66	74	79	82	79	69	79	72	86	79	75	71	74
9. Student Participation	A	54	52	67	- 50	61	66	70	82	70	55	50	48	60	58	63	54	52	52	60	66	62	68	- 51	48	51
	B	62	+ 80	76	72	72	86	82	82	88	91	46	58	69	75	79	76	68	63	63	77	42	45	53	41	36
10. Sociability	A	42	59	60	53	45	30	38	48	38	54	42	+ 69	- 49	52	46	46	58	45	47	49	58	51	43	56	60
	B	58	63	76	- 54	55	50	56	44	61	51	46	67	66	58	61	50	44	57	62	62	42	60	58	- 15	+ 48
11. Perceived Aggression	A	58	64	72	68	66	42	- 61	58	67	56	54	- 74	69	69	64	62	- 81	+ 49	61	46	42	- 60	64	68	+ 58
	B	42	73	54	53	41	30	35	50	54	52	46	59	69	+ 42	35	42	- 70	48	48	45	30	40	50	49	34

+ = a statistically significant shift in the desired direction
- = a statistically significant shift in the undesired direction
? = a statistically significant shift of questionable desirability

*Percentiles in parentheses are directly from S norms. Achievement percentiles in the 76 column are derived by scaling what the S performance would have produced in terms of Q norms for comparison with previous years' performance.

**Achievement percentiles for 73-74 represent all students in the school while achievement percentiles for 75-76 represent only those involved in the ESAA survey. Therefore, comparisons between 74-75 data do not lend themselves to conclusions about statistical significance of change.

APPENDIX D (continued)

OBJECTIVE VARIABLES	YEAR:	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77
		TREATMENT SCHOOLS										CONTROL SCHOOLS														
		F					G					H					I					J				
1. Self-Esteem	A	46	38	56	38	43	58	- 39	+ 64	56	47	58			34	40	50			46	44	58	46	56	- 37	43
	B	58	55	58	63	45	42	29	49	47	53	50			52	51	--			62	26	33	62	44	29	45
2. Attitude Toward School	A	46	62	62	50	48	42	56	57	+ 70	70	54			53	50	46			76	66	62	54	68	- 48	+ 61
	B	66	61	53	64	52	42	59	50	58	70	24			67	66	--			54	80	50	62	52	63	61
3. Achievement: CTBS Q Norms *(CTBS S Norms)																										
Total Arithmetic	A	27	33	** 36	33(52*)		49	- 42	** 37	57(67*)		35	31	** 28	32(51*)		39	42	** 32	54(65*)		45	- 39	** 37	39(56*)	
	B	21	26	** 21	19(36*)		18	19	** 14	22(40*)		13	20	** 20	18(34*)		22	--	** 37	11(20*)		28	22	** 24	26(46*)	
Total Reading	A	30	32	** 45	34(46*)		51	49	** 45	64(67*)		39	37	** 41	51(58*)		53	51	** 37	64(67*)		37	41	** 37	37(49*)	
	B	16	23	** 23	22(34*)		13	19	** 15	22(34*)		21	34	** 30	29(42*)		37	--	** 47	19(31*)		21	21	** 21	25(37*)	
4. Competence	A	62	54	50	61	52	70	56	45	+ 63	64	46			48	58	58			60	52	58	+ 81	- 57	52	57
	B	54	44	51	39	46	28	18	28	27	39	34			41	30	--			38	54	18	+ 39	42	37	37
5. Emotional Stability/ Compliance	A	72	65	- 60	65	42	76	62	48	+ 63	63	62			60	55	46			59	49	38	+ 85	- 67	- 49	52
	B	62	58	64	58	44	30	28	53	- 13	44	34			46	17	--			36	28	38	66	69	- 34	34
6. Parent Participation	A	42	60	64	54	43	58	54	56	71	69	58			62	63	54			70	74	50	55	50	53	64
	B	54	54	73	- 47	68	58	56	59	88	63	58			84	61	--			51	50	62	74	52	+ 87	75
7. Anglos are Chosen	A	70	60	69	59	59	88	82	81	84	83	76			74	73	84			84	78	76	72	70	75	69
	B	18	20	26	- 17	+ 27	34	34	23	39	32	34			29	47	--			36	49	46	40	25	+ 56	- 24
8. Blacks are Chosen	A	34	38	38	38	39	24	28	26	22	25	28			32	36	24			26	30	34	32	34	33	33
	B	86	87	80	85	67	78	76	83	? 61	71	82			71	52	--			82	+ 52	77	73	64	63	- 83
9. Student Participation	A	24	+ 43	52	54	48	70	76	80	76	62	54			39	56	72			74	72	58	48	49	42	40
	B	72	+ 88	74	64	+ 84	62	83	67	78	73	66			76	83	--			37	+ 83	59	70	56	75	68
10. Sociability	A	50	50	49	58	36	54	58	55	58	62	46			37	43	42			51	64	38	+ 88	- 53	44	47
	B	76	66	66	56	56	54	52	57	37	55	62			65	52	--			50	44	20	+ 93	- 71	51	54
11. Perceived Aggression	A	76	72	62	77	+ 50	70	62	63	54	58	54			77	72	62			56	61	46	54	49	57	58
	B	30	- 58	66	+ 38	49	50	58	65	36	36	54			42	39	--			25	21	29	31	58	55	42

APPENDIX E

Central Tendency Trends for Each Elementary School

ELEMENTARY PERCENTILE STANDINGS OF ANGLO (A) AND BLACK (B) STUDENTS ACCORDING TO ESAA INTEGRATION SURVEY AND ACHIEVEMENT DATA

OBJECTIVE VARIABLES		TREATMENT SCHOOLS																								
		A					B					C					D					E				
		YEAR: 73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77
1. Self-Esteem	A	46	44	48	- 36	+ 59	44	48	58	42	53	52	44	52	- 40	+ 56	56	44	+ 68	60	72	42	50	44	50	45
	B	54	50	50	46	47	48	45	55	45	43	40	53	71	- 44	49	58	37	64	58	61	58	47	67	52	64
2. Attitude Toward School	A	46	47	52	33	47	52	52	35	39	57	48	53	53	- 36	36	52	41	53	56	52	52	59	- 47	52	48
	B	56	54	59	36	50	52	57	- 34	49	52	40	74	53	47	49	46	69	42	65	56	68	62	63	53	49
3. Achievement: CTBS Q Norms (Grade 6 only) ***(CTBS S Norms)																										
Total Arithmetic	A	33	29	** 29	28(41***		32	27	** 29	36(49***		23	22	** 32	22(33***		33	38	** 43	52(61***		25	20	** 19	14(22***)	
	B	21	21	** 22	17(26***		29	- 17	** 25	- 12(18***		10	20	** 20	15(24***		14	15	** 17	+ 38(50***		18	8	** 18	14(21***)	
Total Reading	A	40	37	** 26	34(41***		31	31	** 31	40(49***		33	31	** 31	33(41***		46	44	** 50	+ 69(66***		17	- 24	** 24	21(28***)	
	B	31	31	** 21	17(22***		27	19	** 18	18(24***		17	25	** 11	17(21***		15	13	** 20	26(33***		23	12	** 21	18(22***)	
4. Competence	A	60	57	58	52	62	52	57	54	67	75	48	44	48	- 34	+ 50	56	55	68	60	69	48	52	55	52	50
	B	48	46	64	54	63	54	50	52	59	55	44	44	39	39	51	56	54	47	53	45	56	54	52	53	53
5. Emotional Stability/ Compliance	A	60	47	58	39	+ 61	68	62	52	66	68	50	- 34	43	- 27	+ 42	52	52	60	56	60	52	48	55	52	58
	B	48	- 23	+ 54	47	53	36	38	46	45	60	52	24	36	31	33	44	60	61	51	36	44	41	52	48	53
6. Parent Participation	A	40	32	+ 60	- 49	53	59	51	42	+ 73	78	45	49	49	+ 67	- 51	50	44	57	48	+ 58	44	+ 75	- 50	53	44
	B	34	33	+ 54	- 34	43	71	- 43	47	53	64	34	+ 49	- 35	+ 66	- 45	49	40	58	71	56	57	69	51	46	39
7. Anglos are Chosen	A	56	58	** 72	? 44	? 83	44	54	** 56	62	67	50	50	** 52	50	? 81	34	? 56	** 69	62	69	52	60	** 64	59	? 80
	B	56	60	** 60	- 46	+ 82	60	60	** 40	+ 69	75	48	66	** 45	52	81	34	+ 66	** 51	55	62	48	56	** 40	51	+ 87
8. Blacks are Chosen	A	56	44	** 67	61	63	52	60	** 60	68	54	48	60	** 62	48	48	34	40	** 75	71	85	60	60	** 57	62	57
	B	74	71	** 88	+ 61	61	41	60	** 66	75	63	60	64	** 90	80	? 33	70	88	** 90	91	84	80	64	** 81	64	67
9. Sociability	A	62	47	49	44	56	52	- 33	29	+ 49	64	52	- 39	41	- 28	37	52	+ 69	67	- 50	63	44	43	+ 58	47	49
	B	60	- 37	+ 66	55	69	68	- 48	43	+ 67	69	52	71	70	58	41	56	78	65	68	45	54	49	66	67	- 49

+ = a statistically significant shift in the desired direction
- = a statistically significant shift in the undesired direction
? = a statistically significant shift of questionable desirability

*Schools included in the treatment sample changed between 1974-75 and 1975-76; therefore, statistical analysis

**Achievement percentiles for 73-74 represent all students in the school while achievement percentiles for 75-76 represent only those involved in the ESAA survey. Therefore, comparisons between 74-75 data do not lend themselves to conclusions about statistical significance of change.

***Percentiles in parentheses are directly from S norms. Achievement percentiles in the 76 column are derived by scaling what the S performance would have produced in terms of Q norms for comparison with previous years' performance.

BLA/le

APPENDIX E (continued)

OBJECTIVE VARIABLES	YEAR:	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77
		TREATMENT SCHOOLS																								
		F					G					H					I					J				
1. Self-Esteem	A	52	53	52	53	54		60	43	58	45	56 -	38 +	60	50	60	50	43	55	43	50	52	47	47	53	47
	B	44	57	37	47	52		69	57	74	20	52	44	54	78	58	46	43	64 -	35	46	46	48	65	52	70
2. Attitude Toward School	A	56	54 -	41	52	46		59	49	54 -	34	52	50	42	41	34	56	57	41	37	36	56	48	54	49	40
	B	56	44	32	52	69		54	62	81 -	16	40	52	58	58	57	48	44	54	36	53	56	52	39	47	46
3. Achievement: CTBS Q Norms (Grade 6 only) ***(CTBS S Norms)																										
Total Arithmetic	A	33	26 **	28	21(32***)		28	25 **	38	30(42***)		25	22 **	27	26(38***)		25	18 **	22	21(33***)		26	28 **	32	32(45***)	
	B	40	30 **	17	21(32***)		24	16 **	65	9(12***)		9	15 **	11	21(32***)		13	18 **	19	18(26***)		14	14 **	32	20(29***)	
Total Reading	A	42 -	28 **	26	28(37***)		31	28 **	50	25(31***)		26	25 **	39	39(46***)		19	23 **	24	25(31***)		37	28 **	31	39(46***)	
	B	48	34 **	15	31(40***)		33	27 **	88	14(16***)		15	18 **	15 +	30(39***)		17	20 **	17	17(19***)		18	19 **	37	30(37***)	
4. Competence	A	44	44	44	53	48		70	67	61 -	39	70 -	57	46 +	67	67	56	54	43	41	51	56	58 -	43	57	62
	B	52	68	55	56	53		55	51	71 -	17	44	51	44	50	49	44	45	38	30	41	60	44	34	60	48
5. Emotional Stability/ Compliance	A	48	44	52	51	49		60	54	54 -	37	64	53	45 +	64	65	44	41	29	34	33	56	56 -	43 +	55	56
	B	42	53	52	45	43		44	48	47	16	40	39	44	48	71	29	30	25	26	40	60	41	34	51	43
6. Parent Participation	A	36	37 +	50	50	45		58	49	49	32	42	36 +	52	53	51	76	84 -	58	61 -	45	45 +	62 -	35 +	73 -	43
	B	26	27 +	62	42	34		48	63	35	30	31	34 +	48	41	49	45	69	58	64 -	46	29	46	44	65 -	29
7. Anglos are Chosen	A	52	50 **	48	50 ?	76		68 **	49	70	86	50	36 **	60	50 ?	81	40 -	62 **	59	63	71	54	54 **	65	56 ?	84
	B	48	66 **	32	50	67		64 **	60	51	69	46	52 **	33	37 +	76	68	64 **	42	50	63	66	50 **	72 -	45 +	75
8. Blacks are Chosen	A	52	58 **	52	55	64		66 **	47 ?	79	80	36	38 **	57	56	49	52	56 **	62	62	52	48	54 **	70	59	62
	B	76	87 **	84	61	64		80 **	80	68	19	60	78 **	69	65	62	74	83 **	79	67	50	68	71 **	83	89	75
9. Sociability	A	44	44	45	41	44		66	69	63	46	71 -	56	48	54 +	70	44	45	32	25	33	40 +	54 -	40	47	51
	B	71	56	46	56	40		64	66	76	40	32 +	69	52	63	68	36	51	44	39	51	60	51	39 +	63	64

BLA/le

APPENDIX E (continued)

OBJECTIVE VARIABLES	YEAR:	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77	73	74	75	76	77
		TREATMENT SCHOOLS										CONTROL SCHOOLS														
		K					L					M					N					O				
1. Self-Esteem	A	48			56	59				52	36	52	57	53	47	46	60	50	52	52	64	54				59
	B	62			32	57				45	04	60	56	43	58	48	50	55	59	63	36	60				51
2. Attitude Toward School	A	44			52	49				64	40	52	52	62 -	46	46	52	44	44	42	46	56				32
	B	48			27	49				39	44	50	59	74 -	40	32	48	47	29	27	35	56				35
3. Achievement: CTBS Q Norms (Grade 6 only) ***(CTBS S Norms)																										
Total Arithmetic	A	32	40 **	52	38(50***)		40	32 **	29	15(22***)		27	31 **	32 -	20(30***)		35	32 **	43	32(43***)		41	33	40 **	46(54***)	
	B	21	20 **	26	32(43***)		18	21 **	17	(no data)		21	26 **	25	16(25***)		21	15 **	17	18(26***)		10 +	21	20 **	21(33***)	
Total Reading	A	40	44 **	44	50(56***)		48	34 **	27	33(41***)		36	44 **	37	25(17***)		48	37 **	44	31(40***)		48 -	35 +	53 **	39(40***)	
	B	38	19 **	23	50(55***)		20	17 **	44	(no data)		35	29 **	25	17(22***)		27	23 **	23	31(39***)		14 +	25	27 **	24(30***)	
4. Competence	A	48			63	57				65	71	56	52	56	62	56	52	52	42	51	52	64				69
	B	44			56	63				50	24	48	45 +	77	56	57	36	40	33	19	26	44				47
5. Emotional Stability/ Compliance	A	32			56	48				58	88	52	48	48	46	50	52	47	49	53	54	54				65
	B	20			48	40				43	14	48	44 +	74 -	46	42	44	36	32	34	28	44				40
6. Parent Participation	A	64			57	88				73	93	35	42 +	57	61	51	43	49	51	48 +	60	71				76
	B	--			50	56				67	79	39	43	47	59	44	36 +	67 -	32 +	57 -	38	68				48
7. Anglos are Chosen	A	40			36 ?	85				88	93	48	50 **	63	51 ?	79	70 ?	56 **	57	62 ?	91	32				50
	B	68			31	45				80	57	44	30 **	47	57 +	91	60	68 **	43	55	74	40				51
8. Blacks are Chosen	A	56			53	68				80	77	56	58 **	79	78	65	52	56 **	51 +	75	62	26				64
	B	71			67	43				92	19	91 ?	52 **	82	90	65	87	77 **	79	65	43	52				34
9. Sociability	A	48			62	65				72	70	58	48	55	56	52	44	44	38 +	50	45	48				64
	B	68			69	76				64	77	52	74	83	72	45	48	46	43	28	24	62				60

APPENDIX E (continued)

OBJECTIVE VARIABLES		YEAR: 73	74	75	76	77	73	74	75	76	77
		CONTROL SCHOOL					TREATMENT SAMPLE				
		P					ELEMENTARY				
1. Self-Esteem	A	50				--	52	46 *	52 *	50 +	54
	B	46				--	52	47 *	58 *	50	54
2. Attitude Toward School	A	48				46	50	49 *	48 *	47	44
	B	40				44	52	54 *	49 *	47	52
3. Achievement: CTBS Q Norms (Grade 6 only) ***(CTBS S Norms)											
Total Arithmetic	A	22	25 +	35 **	30(43***		29	27 *	32 -	27(39***)	
	B	18	20	21 **	16(25***		16	18 *	20	18(27***)	
Total Reading	A	34	31 +	44 **	50(55***		37	33 *	33	35(44***)	
	B	23	25	30 **	24(30***		21	22 *	19	21(28***)	
4. Competence	A	60				59	57	54 *	52 *	55	57
	B	48				39	52	46 *	48 *	51	52
5. Emotional Stability/ Compliance	A	52				58	55 -	51 *	50 *	50	54
	B	26				42	43	36 *	45 *	43	47
6. Parent Participation	A	71				61	48 +	55 *	50 *	58	55
	B	74				69	45	52 *	50 *	54 -	45
7. Anglos are Chosen	A	56				51	50 ?	57 *	60 *	56 ?	81
	B	48				48	56	59 *	47 *	50 +	74
8. Blacks are Chosen	A	56				64	48	52 *	61 *	63	63
	B	70				75	74	74 *	82 *	68	63
9. Sociability	A	60				48	49	48 *	48 *	46 +	54
	B	44				38	53	51 *	56 *	60	59

LINKING TESTS AND EQUATING RAW SCORES

Bruce L. Arneklev
Tacoma Public Schools

1. A test link is a group of common items administered in different tests. It is assumed that those common items measure the same thing on the different tests, i.e. if a score were derived from only the linking items on one occasion, that score would be useful as a reference point when the same items are administered on another occasion. This assumption has been made historically whenever pre/post testing methodology is implemented, as well as when performance of one group is compared to another in a typical testing program. This assumption in conjunction with Rasch scaling procedures makes it possible to compare performance on different tests which have been linked by common items.
2. The Rasch model is used to calibrate an "item level" (a sample free index of difficulty) for each item on each of the tests to be linked. The model serves to assign an item level to each item on the basis of performance on that item in relation to performance on all the other items on a test. The model serves to center the item of middle difficulty on any test at zero. Calibrations of item levels for other items on each test are calculated to fall above or below the middle difficulty according to student performance. The extent of deviation is on an equal interval scale, and the sum of the item levels for all items on the test will always equal the product of the mid-point on the scale multiplied by the total number of items.
3. Therefore, when item levels for linking items are computed by the Rasch model on a particular test, the relative difficulty of that total test is described by the extent to which the average of the linking item levels is above or below the middle of the Rasch scale. When the average item level on the linking items is the same as the average for all the items on the test, one would conclude that the linking items have the same difficulty as the total test; however, when the average linking item is above the average for the test, one would conclude that the total test is less difficult than the linking items.
4. The rationale above also applies when tests to be linked are compared. By comparing the average calibrations of linking items on one test to the average calibration of those items on another test, a determination is made about the relative difficulty of those two tests. The differences between the average item level of linking items on the two tests is the quantity which can be used to find equivalent raw scores. If the average item level for linking items is the same on two tests of equal length (defined by number of items) and equal variance, it may be concluded that a raw score

from one of the tests is equal to the raw score on the other tests. However, if the average item level of linking items is higher (or lower) on one test, it is necessary to enter tables of Rasch achievement level scale values to determine an equivalent raw score for the second test.

5. A table of achievement levels provides a Rasch equivalent value for each possible raw score on the first test. The difference between average linking item levels on the two tests to be linked is applied to the Rasch equivalent value for the raw score attained on the first test. When that value is added or subtracted algebraically and according to the direction of adjustment desired, the equivalent Rasch value for the second test has been obtained. The equivalent raw score on the second test is obtained by moving horizontally in the achievement level table for the second test from the Rasch value computed.

AN ILLUSTRATION OF HOW TO LINK AND ADJUST RAW SCORES:

There are forty-three mathematics computation and application items on CTBS, Form Q, Level 3 that are also found on CTBS, Form S, Level 3. These forty-three items serve as a link between the two forms.

The mean linking item level on Q3 was .034 logit.

The mean linking item level on S3 was -.122 logit.

These Rasch values indicate that the average item level of linking items on Q3 are slightly more difficult than the average item level of non-linking items, and that the linking items on S3 are less difficult than the average of item levels for non-linking items on that test. By combining these two values, it may be concluded that the math items on S3 are .156 logit more difficult than on Q3.

The average raw score on S3 in one testing situation was found to be 62. The question arises as to what raw score those students would have attained if they had taken Q3. By entering the total math achievement level table for S3, it can be seen that a raw score of 62 is equivalent to .611 logit. Examination of the average item level of the linking items in the two test formats demonstrated that S3 is relatively more difficult than Q3. Applying the .156 adjustment to .611 results in the derivation of an achievement level of .767. An achievement level of .767 in the Q3 achievement level table is equivalent to a raw score of 64. Thus, one may conclude that a raw score of 62 on S3 is equivalent to a raw score of 64 on Q3. This can be checked out by entering the Q3 achievement level table with 64 and finding a value of .760. Subtracting .156 from that value results in an achievement level of .604, which on the S3 achievement level table is equal to a raw score of 62.

APPENDIX F (continued)

LINKING VALUES FOR CTBS TOTAL READING AND TOTAL ARITHMETIC

		Sub-Test	Number of Item Linking (On the Sub-Test)	Form S Average Item Level	Form Q Average Item Level	Differences
Level 2	Total Reading	Vocabulary	3(40)	-.304	-.307 =	.003
		Comprehension	8(45)	.173	.438 =	-.265
		Total Reading	11(85)	.042	.234 =	-.192
	Total Math	Computation	28(48)	-.461	-.329 =	-.132
		Application & Concepts	8(50)	.184	.315 =	-.131
		Total Arithmetic	36(98)	-.318	-.186 =	-.132
Level 3	Total Reading	Vocabulary	20(48)	.011	-.075 =	.096
		Comprehension	11(45)	-.419	-.435 =	.006
		Total Reading	31(85)	-.142	-.199 =	.057
	Total Math	Computation	37(48)	-.187	-.006 =	-.181
		Application & Concepts	6(50)	.283	.277 =	.006
		Total Arithmetic	43(98)	-.122	.034 =	-.156

BLA/js
10/7/77

A RASCH ANSWER TO THE QUESTION OF WHAT A CTBS RAW SCORE ON FORM S IS EQUIVALENT TO ON FORM Q

	Form S3 Raw Score	Form S3 Rasch Achievement Level Equivalents in Logits	Linking Constant Derived From Rasch Calibrations of Common Items on S&Q	S3 Achievement Level Minus Linking Constant Equals These Rasch Achievement Levels For Entering Q3 Achievement Level Tables	Form Q3 Raw Scores Extracted From Q3 Rasch Achievement Level Tables	Difference
TOTAL ARITHMETIC	10	-2.382	-.156	-2.226	12.5	+2.5
	20	-1.506	-.156	-1.350	23	+3
	30	- .908	-.156	- .752	33	+3
	40	- .410	-.156	- .254	43	+3
	50	.051	-.156	.207	53	+3
	60	.515	-.156	.671	62.5	+2.5
	70	1.021	-.156	1.177	72	+2
	80	1.646	-.156	1.802	81	+1
	90	2.629	-.156	2.785	90.5	+0.5
TOTAL READING	10	-2.308	.057	-2.365	9.5	- .5
	20	-1.371	.057	-1.428	19.3	- .7
	30	- .707	.057	- .764	29	-1.0
	40	- .132	.057	- .189	39	-1.0
	50	.428	.057	.371	49	-1.0
	60	1.031	.057	.974	59	-1.0
	70	1.781	.057	1.724	69.5	- .5
	80	3.098	.057	3.041	79.5	- .5

TOTAL ARITHMETIC ACHIEVEMENT LEVEL SCALE

CTBS FORM S, LEVEL 3

TACOMA SCHOOL DISTRICT

M876 GRADE 8 FALL 1976 MATH (COMP,CONCEPTS AND APPLICATIONS)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	6.	0.13	-4.848	1.012
2	3.	0.33	-4.137	0.722
3	1.	0.41	-3.713	0.594
4	1.	0.46	-3.407	0.519
5	1.	0.50	-3.166	0.468
6	0.	0.52	-2.965	0.431
7	1.	0.54	-2.793	0.402
8	1.	0.59	-2.641	0.379
9	2.	0.65	-2.506	0.360
10	2.	0.74	-2.382	0.344
11	1.	0.80	-2.269	0.330
12	1.	0.85	-2.164	0.319
13	3.	0.93	-2.065	0.309
14	4.	1.09	-1.973	0.300
15	2.	1.22	-1.886	0.292
16	1.	1.28	-1.803	0.284
17	3.	1.37	-1.724	0.278
18	5.	1.54	-1.648	0.272
19	3.	1.72	-1.576	0.267
20	6.	1.91	-1.506	0.262
21	13.	2.33	-1.438	0.258
22	18.	3.00	-1.373	0.254
23	15.	3.72	-1.310	0.250
24	16.	4.39	-1.248	0.246
25	16.	5.09	-1.188	0.243
26	28.	6.04	-1.129	0.240
27	17.	7.02	-1.072	0.238
28	25.	7.93	-1.016	0.235
29	25.	9.02	-0.961	0.233
30	31.	10.24	-0.908	0.231
31	18.	11.30	-0.855	0.229
32	38.	12.52	-0.803	0.227
33	36.	14.13	-0.751	0.225
34	30.	15.57	-0.701	0.224
35	29.	16.85	-0.651	0.222
36	30.	18.13	-0.602	0.221
37	35.	19.54	-0.553	0.220
38	31.	20.98	-0.505	0.219
39	27.	22.24	-0.457	0.218
40	26.	23.39	-0.410	0.217
41	29.	24.59	-0.363	0.216
42	42.	26.13	-0.316	0.216
43	36.	27,83	-0.269	0.215
44	30.	29.26	-0.223	0.215
45	41.	30.80	-0.177	0.214

CTBS FORM S, LEVEL 3

(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
46	34.	32.43	-0.131	0.214
47	30.	33.83	-0.086	0.214
48	32.	35.17	-0.040	0.213
49	38.	36.70	0.006	0.213
50	28.	38.13	0.051	0.213
51	30.	39.39	0.097	0.214
52	29.	40.67	0.143	0.214
53	25.	41.85	0.188	0.214
54	39.	43.24	0.234	0.214
55	37.	44.89	0.280	0.215
56	35.	46.46	0.327	0.215
57	36.	48.00	0.373	0.216
58	36.	49.57	0.420	0.217
59	30.	51.00	0.467	0.217
60	35.	52.41	0.515	0.218
61	25.	53.72	0.562	0.219
62	31.	54.93	0.611	0.220
63	25.	56.15	0.660	0.222
64	21.	57.15	0.709	0.223
65	38.	58.43	0.759	0.224
66	39.	60.11	0.810	0.226
67	35.	61.72	0.862	0.228
68	25.	63.02	0.914	0.230
69	35.	64.33	0.967	0.232
70	31.	65.76	1.021	0.234
71	29.	67.07	1.077	0.236
72	37.	68.50	1.133	0.239
73	37.	70.11	1.191	0.242
74	26.	71.48	1.250	0.245
75	31.	72.72	1.311	0.248
76	34.	74.13	1.374	0.252
77	32.	75.57	1.438	0.256
78	24.	76.78	1.505	0.260
79	42.	78.22	1.574	0.265
80	27.	79.72	1.646	0.271
81	36.	81.09	1.721	0.276
82	41.	82.76	1.799	0.283
83	27.	84.24	1.881	0.290
84	36.	85.61	1.967	0.298
85	36.	87.17	2.058	0.307
86	31.	88.63	2.155	0.317
87	27.	89.89	2.259	0.329
88	31.	91.15	2.372	0.342
89	31.	92.50	2.494	0.358
90	15.	93.50	2.629	0.377
91	26.	94.39	2.779	0.400
92	21.	95.41	2.950	0.429
93	25.	96.41	3.149	0.466
94	25.	97.50	3.389	0.518
95	16.	98.39	3.[illegible]4	0.593
96	17.	99.11	4.1[illegible]	0.720
97	12.	99.74	4.826	1.011

APPENDIX F (continued)

TOTAL ARITHMETIC ACHIEVEMENT LEVEL SCALE

CTBS FORM Q, LEVEL 3

TACOMA SCHOOL DISTRICT

M875 GRADE 8 FALL 1975 MATH (COMP,CONCEPTS AND APPLICATIONS)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	1.	0.02	-5.022	1.017
2	0.	0.04	-4.303	0.728
3	1.	0.06	-3.872	0.601
4	1.	0.11	-3.559	0.526
5	0.	0.13	-3.311	0.475
6	0.	0.13	-3.104	0.438
7	0.	0.13	-2.926	0.409
8	2.	0.17	-2.769	0.386
9	0.	0.22	-2.627	0.368
10	1.	0.24	-2.498	0.352
11	0.	0.26	-2.379	0.338
12	1.	0.28	-2.269	0.327
13	2.	0.35	-2.166	0.316
14	3.	0.45	-2.069	0.307
15	2.	0.56	-1.977	0.299
16	2.	0.65	-1.890	0.292
17	2.	0.74	-1.807	0.286
18	5.	0.89	-1.727	0.280
19	7.	1.15	-1.650	0.274
20	10.	1.52	-1.576	0.269
21	6.	1.86	-1.505	0.265
22	9.	2.19	-1.435	0.261
23	6.	2.51	-1.368	0.257
24	16.	2.99	-1.303	0.254
25	12.	3.59	-1.239	0.250
26	19.	4.26	-1.177	0.247
27	16.	5.02	-1.117	0.245
28	13.	5.65	-1.057	0.242
29	16.	6.28	-0.999	0.240
30	24.	7.14	-0.942	0.238
31	15.	7.99	-0.886	0.236
32	23.	8.81	-0.831	0.234
33	27.	9.89	-0.777	0.232
34	24.	11.00	-0.723	0.230
35	24.	12.03	-0.670	0.229
36	26.	13.12	-0.618	0.228
37	43.	14.61	-0.566	0.226
38	41.	16.43	-0.515	0.225
39	35.	18.07	-0.465	0.224
40	36.	19.61	-0.415	0.223
41	30.	21.04	-0.365	0.222
42	33.	22.40	-0.315	0.222
43	34.	23.85	-0.266	0.221
44	46.	25.58	-0.217	0.220
45	36.	27.36	-0.169	0.220

CTBS FORM Q, LEVEL 3

(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
46	42.	29.05	-0.120	0.220
47	39.	30.80	-0.072	0.219
48	40.	32.51	-0.024	0.219
49	40.	34.24	0.024	0.219
50	31.	35.78	0.072	0.219
51	41.	37.34	0.120	0.219
52	33.	38.94	0.168	0.219
53	46.	40.65	0.216	0.219
54	41.	42.53	0.264	0.219
55	40.	44.29	0.312	0.220
56	41.	46.04	0.361	0.220
57	30.	47.58	0.410	0.221
58	50.	49.31	0.459	0.221
59	34.	51.13	0.508	0.222
60	32.	52.55	0.557	0.223
61	24.	53.77	0.607	0.224
62	34.	55.02	0.658	0.225
63	26.	56.32	0.709	0.226
64	34.	57.62	0.760	0.227
65	36.	59.13	0.812	0.229
66	34.	60.65	0.865	0.230
67	37.	62.19	0.918	0.232
68	39.	63.83	0.972	0.234
69	30.	65.32	1.027	0.235
70	36.	66.75	1.083	0.238
71	35.	68.29	1.140	0.240
72	27.	69.63	1.198	0.242
73	35.	70.97	1.258	0.245
74	24.	72.25	1.318	0.248
75	37.	73.57	1.381	0.251
76	38.	75.19	1.445	0.255
77	40.	76.88	1.511	0.259
78	33.	78.46	1.579	0.263
79	34.	79.91	1.649	0.268
80	24.	81.17	1.722	0.273
81	36.	82.47	1.798	0.278
82	30.	83.90	1.877	0.285
83	24.	85.06	1.960	0.292
84	32.	86.28	2.047	0.300
85	26.	87.53	2.139	0.308
86	27.	88.68	2.237	0.318
87	26.	89.83	2.342	0.330
88	17.	90.76	2.455	0.343
89	37.	91.93	2.578	0.359
90	29.	93.35	2.713	0.378
91	19.	94.39	2.863	0.401
92	24.	95.32	3.034	0.429
93	29.	96.47	3.234	0.467
94	32.	97.79	3.474	0.518
95	18.	98.87	3.778	0.593
96	12.	99.52	4.200	0.721
97	5.	99.89	4.909	1.011

APPENDIX F (continued)

TOTAL READING ACHIEVEMENT LEVEL SCALE

CTBS FORM S, LEVEL 3

TACOMA SCHOOL DISTRICT

R876 GRADE 8 FALL 1976 VOCABULARY AND COMPREHENSION

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	15.	0.33	-4.835	1.017
2	7.	0.80	-4.116	0.728
3	7.	1.11	-3.685	0.601
4	4.	1.34	-3.372	0.526
5	1.	1.45	-3.124	0.475
6	2.	1.52	-2.917	0.438
7	0.	1.56	-2.738	0.410
8	2.	1.60	-2.580	0.387
9	2.	1.69	-2.438	0.369
10	1.	1.76	-2.308	0.353
11	1.	1.80	-2.189	0.340
12	4.	1.91	-2.077	0.328
13	1.	2.02	-1.973	0.318
14	4.	2.12	-1.875	0.310
15	8.	2.39	-1.781	0.302
16	4.	2.65	-1.693	0.295
17	7.	2.88	-1.607	0.289
18	12.	3.30	-1.526	0.283
19	14.	3.66	-1.447	0.278
20	16.	4.51	-1.371	0.274
21	12.	5.12	-1.297	0.269
22	22.	5.85	-1.225	0.266
23	15.	6.66	-1.156	0.262
24	13.	7.26	-1.088	0.259
25	16.	7.89	-1.021	0.256
26	28.	8.85	-0.956	0.254
27	11.	9.69	-0.892	0.251
28	21.	10.39	-0.829	0.249
29	33.	11.56	-0.768	0.247
30	23.	12.77	-0.707	0.245
31	28.	13.88	-0.647	0.244
32	27.	15.07	-0.588	0.242
33	28.	16.26	-0.529	0.241
34	23.	17.37	-0.471	0.240
35	32.	18.56	-0.414	0.239
36	33.	19.97	-0.357	0.238
37	32.	21.38	-0.300	0.237
38	27.	22.66	-0.244	0.237
39	30.	23.89	-0.187	0.236
40	27.	25.13	-0.132	0.236

CTBS FORM S, LEVEL 3

(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
41	45.	26.69	-0.076	0.236
42	32.	28.36	-0.020	0.235
43	31.	29.73	0.035	0.235
44	33.	31.11	0.091	0.236
45	41.	32.72	0.147	0.236
46	41.	34.50	0.202	0.236
47	40.	36.25	0.258	0.236
48	49.	38.18	0.315	0.237
49	40.	40.11	0.371	0.238
50	39.	41.83	0.428	0.239
51	47.	43.69	0.485	0.239
52	38.	45.53	0.543	0.241
53	51.	47.46	0.601	0.242
54	41.	49.46	0.660	0.243
55	43.	51.28	0.720	0.245
56	43.	53.14	0.780	0.246
57	40.	54.94	0.841	0.248
58	48.	56.85	0.903	0.250
59	37.	58.69	0.967	0.253
60	51.	60.60	1.031	0.255
61	45.	62.68	1.097	0.258
62	48.	64.70	1.164	0.261
63	34.	66.48	1.233	0.264
64	49.	68.28	1.304	0.268
65	45.	70.32	1.377	0.272
66	49.	72.35	1.452	0.276
67	50.	74.50	1.529	0.281
68	46.	76.58	1.610	0.286
69	37.	78.38	1.694	0.293
70	51.	80.29	1.781	0.299
71	54.	82.57	1.873	0.307
72	49.	84.80	1.969	0.315
73	52.	86.99	2.072	0.325
74	47.	89.14	2.181	0.337
75	33.	90.87	2.298	0.350
76	33.	92.30	2.425	0.365
77	32.	93.71	2.565	0.384
78	28.	95.01	2.720	0.406
79	26.	96.18	2.895	0.434
80	26.	97.31	3.098	0.471
81	16.	98.22	3.343	0.522
82	19.	98.98	3.651	0.597
83	8.	99.57	4.077	0.724
84	6.	99.87	4.791	1.014

APPENDIX F (continued)

TOTAL READING ACHIEVEMENT LEVEL SCALE

CTBS FORM Q, LEVEL 3

TACOMA SCHOOL DISTRICT

R875 ·GRADE 8 FALL 1975 VOCABULARY AND COMPREHENSION

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	1.	0.02	-4.815	1.015
2	0.	0.04	-4.099	0.726
3	0.	0.04	-3.671	0.599
4	0.	0.04	-3.361	0.524
5	0.	0.04	-3.115	0.473
6	2.	0.09	-2.910	0.436
7	1.	0.15	-2.733	0.408
8	1.	0.20	-2.577	0.385
9	2.	0.26	-2.436	0.367
10	1.	0.33	-2.308	0.351
11	1.	0.37	-2.190	0.338
12	0.	0.39	-2.079	0.327
13	2.	0.43	-1.976	0.317
14	2.	0.52	-1.879	0.308
15	6.	0.69	-1.786	0.301
16	2.	0.87	-1.698	0.294
17	9.	1.11	-1.613	0.288
18	9.	1.50	-1.532	0.282
19	9.	1.89	-1.454	0.277
20	21.	2.54	-1.378	0.273
21	19.	3.41	-1.305	0.269
22	23.	4.32	-1.233	0.265
23	26.	5.38	-1.164	0.262
24	20.	6.38	-1.096	0.259
25	19.	7.22	-1.030	0.256
26	19.	8.05	-0.965	0.254
27	23.	8.96	-0.901	0.251
28	22.	9.93	-0.838	0.249
29	26.	10.98	-0.776	0.247
30	32.	12.23	-0.715	0.246
31	31.	13.60	-0.655	0.244
32	33.	14.99	-0.596	0.243
33	37.	16.51	-0.537	0.241
34	35.	18.07	-0.479	0.240
35	26.	19.39	-0.422	0.239
36	35.	20.72	-0.364	0.238
37	33.	22.19	-0.308	0.238
38	40.	23.77	-0.251	0.237
39	40.	25.51	-0.195	0.237
40	32.	27.07	-0.139	0.236

CTBS FORM Q, LEVEL 3
(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
41	48.	28.81	-0.083	0.236
42	42.	30.76	-0.027	0.236
43	27.	32.26	0.029	0.236
44	45.	33.82	0.085	0.236
45	46.	35.79	0.141	0.236
46	38.	37.61	0.197	0.237
47	41.	39.33	0.253	0.237
48	38.	41.04	0.310	0.238
49	47.	42.89	0.367	0.238
50	43.	44.84	0.424	0.239
51	45.	46.75	0.482	0.240
52	46.	48.72	0.540	0.241
53	56.	50.93	0.598	0.243
54	44.	53.10	0.658	0.244
55	61.	55.38	0.718	0.245
56	46.	57.70	0.779	0.247
57	42.	59.61	0.840	0.249
58	48.	61.56	0.903	0.251
59	56.	63.82	0.967	0.253
60	57.	66.27	1.032	0.256
61	47.	68.52	1.098	0.259
62	51.	70.65	1.166	0.262
63	48.	72.80	1.235	0.265
64	42.	74.75	1.306	0.269
65	44.	76.62	1.380	0.273
66	43.	78.50	1.455	0.277
67	50.	80.52	1.533	0.282
68	32.	82.30	1.614	0.287
69	55.	84.19	1.699	0.293
70	46.	86.38	1.786	0.300
71	34.	88.11	1.879	0.308
72	43.	89.78	1.976	0.316
73	27.	91.30	2.079	0.326
74	33.	92.60	2.189	0.337
75	27.	93.90	2.306	0.350
76	34.	95.23	2.434	0.366
77	19.	96.38	2.574	0.384
78	17.	97.16	2.730	0.407
79	10.	97.74	2.906	0.435
80	12.	98.22	3.110	0.472
81	11.	98.72	3.355	0.523
82	13.	99.24	3.664	0.598
83	7.	99.67	4.091	0.725
84	4.	99.91	4.805	1.014

APPENDIX F (continued)

TOTAL ARITHMETIC ACHIEVEMENT LEVEL SCALE

CTBS FORM S, LEVEL 2

TACOMA SCHOOL DISTRICT

M676 GRADE 6 FALL 1976 MATH (COMP,CONCEPTS AND APPLICATIONS)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	1.	0.02	-5.042	1.018
2	0.	0.05	-4.322	0.729
3	0.	0.05	-3.889	0.602
4	1.	0.07	-3.576	0.527
5	1.	0.12	-3.327	0.476
6	0.	0.15	-3.120	0.438
7	1.	0.17	-2.942	0.409
8	1.	0.22	-2.784	0.386
9	0.	0.25	-2.643	0.367
10	1.	0.27	-2.514	0.351
11	2.	0.34	-2.396	0.338
12	1.	0.42	-2.286	0.326
13	1.	0.47	-2.184	0.316
14	0.	0.49	-2.087	0.307
15	1.	0.52	-1.996	0.299
16	2.	0.59	-1.909	0.291
17	1.	0.66	-1.826	0.285
18	3.	0.76	-1.747	0.279
19	5.	0.96	-1.670	0.274
20	2.	1.13	-1.597	0.269
21	5.	1.30	-1.526	0.264
22	3.	1.50	-1.457	0.260
23	6.	1.72	-1.390	0.256
24	11.	2.14	-1.325	0.253
25	7.	2.58	-1.262	0.250
26	12.	3.05	-1.200	0.247
27	6.	3.50	-1.140	0.244
28	13.	3.96	-1.081	0.242
29	11.	4.55	-1.023	0.239
30	24.	5.42	-0.966	0.237
31	12.	6.30	-0.910	0.235
32	22.	7.14	-0.855	0.234
33	24.	8.27	-0.801	0.232
34	25.	9.48	-0.748	0.230
35	20.	10.59	-0.695	0.229
36	19.	11.55	-0.643	0.228
37	29.	12.73	-0.591	0.226
38	40.	14.43	-0.540	0.225
39	26.	16.05	-0.489	0.224
40	30.	17.43	-0.439	0.224
41	20.	18.66	-0.389	0.223
42	22.	19.69	-0.339	0.222
43	22.	20.78	-0.290	0.222
44	27.	21.98	-0.241	0.221
45	21.	23.17	-0.192	0.221

CTBS FORM S, LEVEL 2

(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
46	23.	24.25	-0.143	0.220
47	31.	25.58	-0.094	0.220
48	27.	27.01	-0.046	0.220
49	23.	28.24	0.003	0.220
50	16.	29.20	0.051	0.220
51	30.	30.33	0.100	0.220
52	24.	31.66	0.149	0.220
53	24.	32.84	0.197	0.221
54	31.	34.19	0.246	0.221
55	28.	35.65	0.295	0.222
56	28.	37.03	0.345	0.222
57	28.	38.40	0.394	0.223
58	31.	39.86	0.444	0.224
59	32.	41.41	0.494	0.224
60	31.	42.96	0.545	0.225
61	35.	44.58	0.596	0.226
62	41.	46.45	0.648	0.228
63	39.	48.42	0.700	0.229
64	41.	50.39	0.753	0.230
65	36.	52.29	0.806	0.232
66	21.	53.69	0.860	0.233
67	35.	55.07	0.915	0.235
68	39.	56.89	0.971	0.237
69	29.	58.57	1.028	0.239
70	38.	60.22	1.086	0.241
71	45.	62.26	1.145	0.244
72	43.	64.43	1.205	0.247
73	46.	66.62	1.266	0.249
74	35.	68.61	1.329	0.253
75	50.	70.70	1.394	0.256
76	35.	72.80	1.461	0.260
77	41.	74.67	1.529	0.264
78	27.	76.34	1.600	0.268
79	44.	78.09	1.673	0.273
80	47.	80.33	1.749	0.278
81	46.	82.62	1.828	0.284
82	32.	84.54	1.910	0.290
83	44.	86.41	1.996	0.297
84	37.	88.40	2.087	0.305
85	35.	90.18	2.183	0.314
86	25.	91.65	2.285	0.325
87	31.	93.03	2.393	0.336
88	23.	94.36	2.511	0.350
89	22.	95.47	2.638	0.365
90	21.	96.53	2.778	0.384
91	20.	97.54	2.933	0.407
92	12.	98.33	3.109	0.436
93	9.	98.84	3.314	0.473
94	9.	99.29	3.560	0.524
95	6.	99.66	3.870	0.599
96	3.	99.88	4.298	0.726
97	1.	99.98	5.014	1.015

APPENDIX F (continued)

TOTAL ARITHMETIC ACHIEVEMENT LEVEL SCALE

CTBS FORM Q, LEVEL 2

TACOMA SCHOOL DISTRICT

M675 GRADE 6 FALL 1975 MATH (COMP,CONCEPTS AND APPLICATIONS)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	0.	0.0	-5.190	1.019
2	0.	0.0	-4.470	0.729
3	1.	0.02	-4.038	0.603
4	0.	0.05	-3.724	0.528
5	0.	0.05	-3.475	0.477
6	1.	0.07	-3.266	0.440
7	1.	0.11	-3.086	0.412
8	0.	0.14	-2.927	0.389
9	0.	0.14	-2.783	0.371
10	1.	0.16	-2.652	0.355
11	0.	0.16	-2.531	0.342
12	1.	0.20	-2.419	0.330
13	0.	0.23	-2.313	0.320
14	0.	0.23	-2.214	0.312
15	1.	0.25	-2.119	0.304
16	1.	0.29	-2.029	0.297
17	1.	0.34	-1.943	0.290
18	1.	0.38	-1.861	0.285
19	0.	0.41	-1.781	0.280
20	2.	0.45	-1.704	0.275
21	6.	0.63	-1.630	0.270
22	3.	0.83	-1.558	0.267
23	5.	1.01	-1.488	0.263
24	5.	1.24	-1.419	0.260
25	6.	1.49	-1.353	0.256
26	2.	1.67	-1.288	0.254
27	11.	1.96	-1.224	0.251
28	4.	2.30	-1.162	0.249
29	6.	2.53	-1.100	0.246
30	16.	3.02	-1.040	0.244
31	12.	3.65	-0.981	0.242
32	9.	4.13	-0.922	0.241
33	10.	4.56	-0.864	0.239
34	14.	5.10	-0.808	0.238
35	14.	5.73	-0.751	0.236
36	23.	6.56	-0.696	0.235
37	19.	7.51	-0.641	0.234
38	22.	8.43	-0.586	0.233
39	22.	9.43	-0.532	0.232
40	26.	10.51	-0.478	0.231
41	23.	11.61	-0.425	0.231
42	15.	12.47	-0.371	0.230
43	14.	13.13	-0.318	0.229
44	24.	13.98	-0.266	0.229
45	20.	14.98	-0.213	0.229

CTBS FORM Q, LEVEL 2
(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
46	23.	15.94	-0.161	0.228
47	23.	16.98	-0.109	0.228
48	27.	18.11	-0.056	0.228
49	29.	19.37	-0.004	0.228
50	24.	20.57	0.048	0.228
51	27.	21.72	0.100	0.228
52	31.	23.03	0.153	0.229
53	34.	24.49	0.205	0.229
54	34.	26.03	0.258	0.229
55	21.	27.27	0.311	0.230
56	36.	28.55	0.364	0.230
57	26.	29.95	0.417	0.231
58	25.	31.10	0.471	0.232
59	37.	32.50	0.525	0.233
60	31.	34.03	0.580	0.234
61	27.	35.34	0.635	0.235
62	34.	36.72	0.690	0.236
63	32.	38.20	0.746	0.237
64	40.	39.83	0.803	0.239
65	25.	41.29	0.861	0.240
66	43.	42.83	0.919	0.242
67	43.	44.77	0.978	0.243
68	39.	46.62	1.038	0.245
69	29.	48.15	1.099	0.247
70	45.	49.82	1.160	0.250
71	42.	51.78	1.224	0.252
72	49.	53.83	1.288	0.255
73	62.	56.34	1.354	0.258
74	44.	58.73	1.421	0.261
75	57.	61.01	1.490	0.264
76	36.	63.10	1.560	0.267
77	54.	65.13	1.633	0.271
78	48.	67.43	1.708	0.276
79	54.	69.73	1.785	0.280
80	64.	72.40	1.865	0.285
81	55.	75.08	1.948	0.291
82	59.	77.65	2.034	0.297
83	47.	80.04	2.124	0.304
84	56.	82.36	2.219	0.312
85	40.	84.53	2.319	0.321
86	50.	86.56	2.425	0.331
87	42.	88.63	2.537	0.342
88	48.	90.66	2.658	0.355
89	40.	92.65	2.790	0.371
90	39.	94.43	2.933	0.389
91	29.	95.96	3.092	0.412
92	19.	97.05	3.272	0.440
93	18.	97.88	3.481	0.477
94	17.	98.67	3.730	0.528
95	11.	99.30	4.044	0.602
96	8.	99.73	4.475	0.729
97	2.	99.95	5.195	1.019

APPENDIX F (continued)

TOTAL READING ACHIEVEMENT LEVEL SCALE

CTBS FORM S, LEVEL 2

TACOMA SCHOOL DISTRICT

R676 GRADE 6 FALL 1976 VOCABULARY AND COMPREHENSION

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	2.	0.05	-4.912	1.020
2	0.	0.10	-4.189	0.731
3	1.	0.12	-3.755	0.604
4	2.	0.20	-3.439	0.529
5	1.	0.27	-3.186	0.479
6	2.	0.34	-2.978	0.442
7	1.	0.42	-2.796	0.413
8	0.	0.44	-2.636	0.390
9	0.	0.44	-2.491	0.372
10	1.	0.47	-2.360	0.356
11	3.	0.57	-2.238	0.343
12	2.	0.69	-2.125	0.331
13	1.	0.76	-2.019	0.321
14	1.	0.81	-1.918	0.313
15	3.	0.91	-1.823	0.305
16	4.	1.08	-1.733	0.298
17	10.	1.43	-1.646	0.292
18	10.	1.92	-1.562	0.286
19	7.	2.34	-1.482	0.281
20	9.	2.73	-1.404	0.276
21	8.	3.15	-1.329	0.272
22	25.	3.96	-1.256	0.268
23	17.	5.00	-1.185	0.265
24	12.	5.71	-1.115	0.262
25	15.	6.38	-1.047	0.259
26	13.	7.07	-0.981	0.256
27	16.	7.78	-0.916	0.254
28	38.	9.11	-0.852	0.252
29	25.	10.66	-0.789	0.250
30	26.	11.92	-0.726	0.248
31	31.	13.32	-0.665	0.247
32	16.	14.48	-0.605	0.245
33	20.	15.36	-0.545	0.244
34	20.	16.35	-0.485	0.243
35	25.	17.45	-0.427	0.242
36	16.	18.46	-0.368	0.241
37	32.	19.65	-0.310	0.240
38	20.	20.93	-0.253	0.239
39	34.	22.26	-0.195	0.239
40	29.	23.81	-0.138	0.239

CTBS FORM S, LEVEL 2
(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	EPROR
41	18.	24.96	-0.081	0.238
42	24.	26.00	-0.024	0.238
43	32.	27.38	0.033	0.238
44	27.	28.83	0.089	0.238
45	24.	30.08	0.146	0.238
46	32.	31.46	0.203	0.239
47	22.	32.79	0.261	0.239
48	23.	33.90	0.318	0.240
49	23.	35.03	0.376	0.240
50	31.	36.36	0.434	0.241
51	32.	37.91	0.493	0.242
52	35.	39.56	0.552	0.243
53	41.	41.43	0.612	0.245
54	32.	43.23	0.672	0.246
55	28.	44.71	0.733	0.248
56	40.	46.38	0.795	0.249
57	41.	48.38	0.858	0.251
58	45.	50.49	0.921	0.253
59	47.	52.76	0.986	0.256
60	43.	54.97	1.052	0.258
61	39.	56.99	1.120	0.261
62	35.	58.81	1.189	0.264
63	49.	60.88	1.260	0.268
64	48.	63.27	1.332	0.271
65	47.	65.61	1.407	0.275
66	40.	67.75	1.484	0.280
67	46.	69.87	1.564	0.285
68	36.	71.89	1.647	0.290
69	51.	74.03	1.733	0.297
70	50.	76.51	1.823	0.303
71	39.	78.71	1.917	0.311
72	43.	80.72	2.016	0.320
73	37.	82.69	2.122	0.330
74	39.	84.56	2.234	0.341
75	44.	86.61	2.354	0.354
76	43.	88.75	2.485	0.370
77	30.	90.55	2.628	0.389
78	36.	92.17	2.787	0.411
79	33.	93.87	2.967	0.440
80	31.	95.45	3.175	0.476
81	31.	96.97	3.424	0.527
82	27.	98.40	3.737	0.602
83	8.	99.26	4.169	0.729
84	11.	99.73	4.889	1.018

APPENDIX F (continued)

TOTAL READING ACHIEVEMENT LEVEL SCALE

CTBS FORM Q, LEVEL 2

TACOMA SCHOOL DISTRICT

R675 GRADE 6 FALL 1975 VOCABULARY AND COMPREHENSION

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
1	1.	0.02	-4.848	1.017
2	0.	0.05	-4.130	0.727
3	1.	0.07	-3.700	0.600
4	1.	0.11	-3.388	0.525
5	0.	0.14	-3.141	0.475
6	0.	0.14	-2.934	0.438
7	0.	0.14	-2.756	0.409
8	1.	0.16	-2.599	0.387
9	2.	0.23	-2.457	0.368
10	1.	0.29	-2.327	0.353
11	1.	0.34	-2.208	0.339
12	0.	0.36	-2.097	0.328
13	0.	0.36	-1.993	0.318
14	2.	0.41	-1.895	0.309
15	3.	0.52	-1.802	0.302
16	6.	0.72	-1.713	0.295
17	3.	0.93	-1.628	0.289
18	7.	1.15	-1.546	0.283
19	9.	1.51	-1.467	0.278
20	7.	1.87	-1.391	0.274
21	17.	2.41	-1.317	0.270
22	19.	3.23	-1.246	0.266
23	18.	4.06	-1.176	0.263
24	15.	4.81	-1.107	0.260
25	19.	5.57	-1.041	0.257
26	12.	6.27	-0.975	0.254
27	21.	7.02	-0.911	0.252
28	21.	7.96	-0.848	0.250
29	15.	8.78	-0.786	0.248
30	13.	9.41	-0.725	0.246
31	20.	10.15	-0.665	0.245
32	19.	11.03	-0.605	0.243
33	22.	11.96	-0.546	0.242
34	31.	13.15	-0.487	0.241
35	23.	14.37	-0.429	0.240
36	26.	15.48	-0.372	0.239
37	26.	16.65	-0.315	0.239
38	18.	17.64	-0.258	0.238
39	31.	18.75	-0.201	0.238
40	24.	19.99	-0.144	0.237
41	21.	21.01	-0.088	0.237
42	35.	22.27	-0.031	0.237
43	21.	23.53	0.025	0.237
44	34.	24.77	0.081	0.237
45	32.	26.26	0.138	0.238

CTBS FORM Q, LEVEL 2
(continued)

SCORE	FREQ	PER CENTILE	ACHIEVEMENT	ERROR
46	24.	27.53	0.195	0.238
47	28.	28.70	0.251	0.238
48	30.	30.01	0.309	0.239
49	39.	31.57	0.366	0.240
50	43.	33.42	0.424	0.241
51	29.	35.04	0.482	0.242
52	39.	36.57	0.541	0.243
53	33.	38.20	0.601	0.244
54	34.	39.71	0.661	0.246
55	37.	41.31	0.721	0.247
56	42.	43.10	0.783	0.249
57	47.	45.10	0.846	0.251
58	45.	47.18	0.909	0.253
59	53.	49.39	0.974	0.255
60	37.	51.42	1.040	0.258
61	46.	53.29	1.107	0.261
62	41.	55.26	1.176	0.264
63	46.	57.22	1.246	0.267
64	43.	59.23	1.318	0.271
65	59.	61.53	1.393	0.275
66	51.	64.01	1.470	0.279
67	49.	66.27	1.549	0.284
68	61.	68.75	1.631	0.290
69	57.	71.41	1.717	0.296
70	63.	74.12	1.806	0.302
71	69.	77.10	1.900	0.310
72	50.	79.78	1.998	0.319
73	67.	82.42	2.102	0.328
74	52.	85.11	2.214	0.340
75	62.	87.68	2.333	0.353
76	51.	90.23	2.462	0.368
77	31.	92.08	2.604	0.387
78	37.	93.61	2.761	0.409
79	40.	95.35	2.939	0.437
80	34.	97.02	3.145	0.474
81	28.	98.42	3.392	0.525
82	15.	99.39	3.703	0.599
83	4.	99.82	4.132	0.726
84	2.	99.95	4.848	1.016

IMPROVING CRITERION-RELATED VALIDITY BY ADJUSTING SELF-CONCEPT SCORES

BRUCE L. ARNEKLEV

Office of Evaluation
TACOMA PUBLIC SCHOOLS
P. O. Box 1357
Tacoma, Washington 98401

A Symposium Paper
presented at the Annual Meeting of the
AMERICAN PSYCHOLOGICAL ASSOCIATION

September 4, 1976
Washington, D. C.

INTRODUCTION

Several authors (Arneklev, 1970 and 1975; Coopersmith, 1967; Fitts, 1965; Glazer, 1972; Hewitt and Goldman, 1974; Kay and Felker, 1975; and Wylie, 1957 and 1974) have discussed the theoretical importance of defensiveness as a variable to be considered in the assessment of self-concept by self-report. Theory dictates that a person who is well adjusted and self-accepting is more willing to participate in self-disclosure of personal feelings including strengths as well as weaknesses. If a person acknowledges inadequacies on most current self-report measures the score received would be decreased; on the contrary, a defensive person who cannot or is unwilling to reveal feelings of personal inadequacy is likely to receive an artificially inflated score.

Few attempts have been made and little success has been realized in psychometrically substantiating this theory. In one study (Arneklev, 1975) where defensiveness was taken into account in scoring procedures, adjusted results of an educational program were significantly different from self-report responses scored through standard procedures. However, superiority (greater validity) of the adjusted scores could only be substantiated on theoretical grounds in that study.

Improvement of self-concept has been the objective for many programs as though it were a panacea. This is probably because levels of self-concept are believed to be associated with most desired outcomes from treatment. Some literature is available (e.g., Chang, 1975; Purkey, 1970 or Scott, 1976) to substantiate the belief of association. The intent of this study was to see if the extent of association between self-reports of self-concepts and several other desired outcomes could be improved by taking defensiveness into account in the scoring procedure.

PROCEDURES*

Data on a cross-section of students were collected at grade levels 3, 6, and 8 in a medium sized school district. Three types of data were used in the analysis.

A. Total Reading and Total Arithmetic scores indicative of student performance on the Comprehensive Tests of Basic Skills (CTBS).

B. Teacher ratings (TR) of students on semantic differential and Likert types of scales indicative of how students were perceived by their teachers.

C. Self-reports (SR) of students on survey items presumed to be indicative of self-concept, attitude toward school, and defensiveness.

Information discussed here is part of a larger pool of data collected through an annual monitoring of desegregation/integration status in the school district. Collection procedures are outlined in Program Research in Integrated Multi-Ethnic Education (PRIME) manuals published under the direction of Jane R. Mercer at the University of California at Riverside in 1973-1974. Several items were added to measure defensiveness.

Items (e.g., "How often do you tell the truth?" or "How often do you like everyone?") for measuring defensiveness were placed among the self-report items used to measure self-concept. These items were scored as indicative of defensiveness only when the respondent marked "always" on the answer sheet. The sum of each person's scores on these items was used as his/her score for defensiveness.

Adjusted self-concept scores were derived by subtracting each student's defensiveness score from his/her score for self-concept. An a priori decision was made to make the maximum possible score on the defensiveness scale equal to that on the self-concept scale. In this way a person who received the highest possible score on the defensiveness scale would receive an adjusted score of zero if he/she attained a "perfect" score on the self-concept scale. If the respondent did not achieve a score on any of the defensiveness items, his/her adjusted and unadjusted scores would be the same.

---

*Appendix H of this report is used to indicate variables monitored, scoring procedures, and items used in order to derive objective information related to the second and third types of data noted above.

Determination of the extent to which adjusted scores improved was made by examination of correlation coefficients. It was hypothesized that correlations between criterion variables and adjusted scores would be higher than correlations with unadjusted scores.

RESULTS

Correlation coefficients in Tables I, II, and III are used to indicate the degree of association between variables encompassed by the three types of data discussed in this paper. The first two (A and B) are used as criterion variables against which self-report (C type) variables are correlated.

Correlations between achievement measures are the highest, accounting for over fifty percent of the variance in all cases at the three grade levels. Correlations between teacher rating (TR) measures are moderately high. One striking aspect of TR variables is the extent of association which they hold with achievement measures. The extent of association between TR measures and achievement also appears to increase with grade level.

It is of special interest to this study that no correlation between self-report (SR) of self-concept and achievement or teacher rating variables accounts for more than ten percent of common variance. Correlations between self-concept scores adjusted for defensiveness and achievement variables were slightly higher than unadjusted scores at grades three and eight; but as with unadjusted scores, none accounted for as much as ten percent of the variance among criterion variables.

Table I

CORRELATIONS BETWEEN INTEGRATION VARIABLES

Grade Three (N = 349)

DATA TYPES	VARIABLE	1	2	6	7	8	9	10	11	12	13	14	15	16	17	18	25
A	1 CTBS Total Reading		82	16	10	43	42	30	37	-03	07	04	09	-15	14	04	15
	2 " " Arithmetic	82		13	09	39	40	26	30	-01	05	01	13	-17	20	09	16
B	6 Student Sociability TR	16	13		19	43	37	56	41	09	18	07	03	01	-04	03	20
	7 Emot. Stabil./Compli. TR	10	09	19		46	38	37	29	-77	09	09	08	08	-06	04	18
	8 Competence TR	43	39	43	46		84	59	77	-19	17	10	18	-05	09	21	22
	9 Performance TR	42	40	37	38	84		63	81	-17	13	07	18	-10	12	20	20
	10 Feelings of Worth TR	30	26	56	37	59	63		63	-13	15	06	13	-03	06	08	16
	11 Success Rate TR	37	30	41	29	77	81	63		-04	13	0	16	-02	05	19	15
	12 Defensiveness TR	-03	-01	09	-77	-19	-17	-13	-04		-03	-10	-05	-02	02	-03	-10
	13 Parent Participation TR	07	05	18	09	17	13	15	13	-03		52	02	-01	01	03	-10
	14 Class/Parent Involve. TR	04	01	07	09	10	07	06	0	-10	52		07	02	01	-02	09
C	15 Self-Concept SR	09	13	03	08	18	18	13	16	-05	02	07		23	26	43	17
	16 Defensiveness SR	-15	-17	01	08	-05	-10	-03	-02	-02	-01	02	23		-77	10	11
	17 Adjusted Self-Concept SR	14	20	-04	-06	09	12	06	05	02	01	01	26	-77		14	-03
	18 Adequacy in School SR	04	09	03	04	21	20	08	19	-03	03	-02	43	10	14		11
	25 Attitude Toward School SR	15	16	20	18	22	20	16	15	-10	06	09	17	11	-03	11	

Decimal points deleted. (Values of 11 and 14 or larger are significant respectively at the .05 and .01 levels of confidence.)

TR = Teacher Rating
SR = Student Reported

Table II

CORRELATIONS BETWEEN INTEGRATION VARIABLES

Grade Six (N = 485)

DATA TYPES		VARIABLE	1	2	6	7	8	9	10	11	12	13	14	15	16	17	18	25
A	1	CTBS Total Reading		85	14	13	43	43	31	40	-13	23	12	21	-02	14	17	15
	2	" " Arithmetic	85		16	15	42	40	28	37	-13	21	10	21	-05	16	23	18
B	6	Student Sociability TR	14	16		22	35	36	49	35	03	07	07	09	02	01	10	22
	7	Emot. Stabil./Compli. TR	13	15	22		49	47	41	39	-80	12	07	13	01	05	09	23
	8	Competence TR	43	42	35	49		82	60	76	-32	16	09	28	-10	24	29	28
	9	Performance TR	43	40	36	47	82		65	80	-34	16	09	25	-08	21	27	20
	10	Feelings of Worth TR	31	28	49	41	60	65		65	-22	09	04	18	-05	13	17	16
	11	Success Rate TR	40	37	35	39	76	80	65		-23	16	11	24	-08	19	26	20
	12	Defensiveness TR	-13	-13	03	-80	-32	-34	-22	-23		-02	-04	-14	-01	-06	-09	-14
	13	Parent Participation TR	23	21	07	12	16	16	09	16	-02		56	01	-04	04	09	12
	14	Class/Parent Involve. TR	12	10	07	07	09	09	04	11	-04	56		02	-02	03	08	08
C	15	Self-Concept SR	21	21	09	13	28	25	18	24	-14	01	02		13	42	57	30
	16	Defensiveness SR	-02	-05	02	01	-10	-08	-05	-08	-01	-04	-02	13		-78	06	14
	17	Adjusted Self-Concept SR	14	16	01	05	24	21	13	19	-06	04	03	42	-78		24	04
	18	Adequacy in School SR	17	23	10	09	29	27	17	26	-09	09	08	57	06	24		22
	25	Attitude Toward School SR	15	18	22	23	28	20	16	20	-14	12	08	30	14	04	22	

Decimal points deleted. (Values 09 and 11 are significant respectively at the .05 and .01 levels of confidence.)

TR = Teacher Rating
SR = Student Reported

Table III

CORRELATIONS BETWEEN INTEGRATION VARIABLES

Grade Eight (N = 304)

DATA TYPES	VARIABLE	1	2	6	7	8	9	10	11	12	13	14	15	16	17	18	25
A	1 CTBS Total Reading		71	13	29	53	53	38	45	-20	-06		12	-19	21	11	14
	2 " " Arithmetic	71		19	36	62	58	48	51	-25	-05		13	-27	28	16	19
B	6 Student Sociability TR	13	19		24	46	41	57	46	03	-01		-02	-01	-01	08	15
	7 Emot. Stabil./Compli. TR	29	36	24		61	54	41	47	-77	-17		00	-15	12	07	17
	8 Competence TR	53	62	46	61		86	71	81	-37	-07		11	-16	19	15	18
	9 Performance TR	53	58	41	54	86		69	81	-35	-01		14	-13	21	13	17
	10 Feelings of Worth TR	38	48	57	41	71	69		73	-21	-04		07	-09	12	11	13
	11 Success Rate TR	45	51	46	47	81	81	73		-30	00		09	-12	16	06	14
	12 Defensiveness TR	-20	-25	03	-77	-37	-35	-21	-30		16		06	16	-09	01	-08
	13 Parent Participation SR	-06	-05	-01	-17	-07	-01	-04	00	16			14	-09	-01	-05	-13
	14 DATA NOT COLLECTED AT GRADE 8																
C	15 Self-Concept SR	12	13	-02	00	11	14	07	09	06	14			14	52	20	11
	16 Defensiveness SR	-19	-27	-01	-15	-16	-13	-09	-12	16	09		14		-73	21	02
	17 Adjusted Self-Concept SR	21	28	-01	12	19	21	12	16	-09	-01		52	-73		-04	04
	18 Adequancy in School SR	11	16	08	07	15	13	11	06	01	-05		20	21	-04		17
	25 Attitude Toward School SR	14	19	15	17	18	17	13	14	-08	-13		11	02	04	17	

Decimal points deleted. (Values 09 and 11 are significant respectively at the .05 and .01 levels of confidence.)

TR = Teacher Rating
SR = Student Reported

DISCUSSION AND CONCLUSIONS

Perhaps the most noteworthy finding from this study was the relative lack of association between self-report measures and criterion variables. Magnitude of correlations were relatively constant across grade levels, but the amount of variance accounted for was so small that conclusions about indications of validity are questionable.

Adjusting self-report scores because of defensiveness did improve correlations with achievement scores at grades three and eight, but the increased variance accounted for even in those cases was not large enough for practical utility. However, before discounting theoretical notions about the role of defensiveness in self-concept assessment at least two methodological problems in this study should be examined. First is the validity of the defensiveness measure itself, and second is the relative weighting assigned to defensiveness scores when making adjustments.

There are several issues which may account for findings or lack thereof in this study.

1. The assumed linearity of scores from self-report measures of self-concept or defensivenss. (e.g., perhaps only self-report scores of highly defensive students should be adjusted)
2. Self-report scores may mean different things with changes in age, sex, ethnicity and/or SES.
3. The self-report of an accurate conceptual picture of oneself may be different from the accurate value or feelings which the individual holds for self.

4. Achievement level of students tends to have a prevailing influence on how they are rated by their teachers, but may not be the "best" criterion against which to validate a self-report measure.
5. Defensiveness may be an integral part of self-concept. Discerning what is healthy as opposed to pathological may be a clinical and/or situational problem beyond the scope of group test capabilities.

Literature Cited

Arneklev, Bruce L. 1975. Adjusting self-concept scores for the confounding effects of defensiveness. Unpublished paper presented at the annual American Educational Research Association meeting in Washington, D.C., April 2, 1975. ERIC designation ED 104 938.

_________________. 1970. The use of defensiveness as a covariate of self-report in the assessment of self-concept among Navajo adolescents. Unpublished doctoral dissertation. Utah State University, Logan, Utah. 105 p.

Chang, Therea S. 1975. The relationship between children's self-concepts, teachers ratings, and academic achievement. Unpublished paper presented at the annual American Educational Research Association meeting in Washington, D.C., April 2, 1975.

Combs, A. W. 1962. The self in chaos. Contemporary Psychology 7:53-54.

____________, D.W. Soper, and C.C. Courson. 1963. The measurement of self-concept and self-report. Educational and Psychology Measurement 23:493-500.

Coopersmith, Stanley. 1967. The antecedents of self-esteem. W.H. Freeman and Company, San Francisco, California. 283 p.

Fitts, William H. 1965. Manual for the Tennessee Self-Concept Scale. Counselor Recording and Tests, Nashville, Tennessee. 31 p.

Glazer, Vicki I. 1972. The relationship of high approval motivation to differences in reported self-esteem. Unpublished doctoral dissertation. University of Florida, Gainsville, Florida. 105 p. (Original not seen; abstracted in Dissertation Abstracts International. 1973. Volume 33 (7-B) pp. 3301-2).

Hewitt, Jay and Morton Goldman. 1974. Self esteem, need for approval, and reaction to personal evaluations. Journal of Experimental and Social Psychology. 10:201-210.

Kay, Richard and Donald Felker. 1975. Level of Aspiration: A behavioral expression of self-concept. Unpublished paper presented at the annual American Educational Research Association meeting in Washington, D.C., April 2, 1975.

Purkey, William W. 1970. Self-concept and school achievement. Prentice-Hall Inc., Englewood Cliffs, New Jersey. 86 p.

Scott, Corinne C. 1976. Academic self-concept: A corroborative measure. Unpublished paper presented at the American Educational Research Associates annual meeting in San Francisco, California, April 23, 1976.

Wylie, Ruth C. 1957. Some relationships between defensiveness and self-concept discrepancies. Journal of Personality, 25:600-616.

______________, 1974. The self-concept: Revised edition, Volume I. University of Nebraska Press, Lincoln, Nebraska.

APPENDIX H

INTEGRATION SURVEY VARIABLES AND MATERIALS

(1975, 76, and 77)

ELEMENTARY No.	VARIABLE NAME	SECONDARY No.
1.	CTBS Total Reading (Raw Score)	1.
2.	" " Arithmetic (Raw Score)	2.
3.	Ethnicity	3.
4.	Sex (Male 1, Female 2)	4.
5.	Grade Level	5.
	Teacher Rating of Student	
6.	Student Sociability	6.
7.	Emotional Stability/Compliance	7.
8.	Competence	8.
9.	Performance	9.
10.	Feelings of Worth	10.
11.	Success Rate	11.
12.	Defensiveness	12.
13.	Parent Participation	13.
14.	Classroom Involvement of Parents	NA
	Student Reported:	
15.	Self-Concept	15.
16.	Defensiveness	16.
17.	Adjusted Self-Concept	17.
18.	Adequacy in School	18.
19.	Social Interaction:	NA
20.	Choosing Anglo	20.
21.	" Black	21.
22.	" Native-American	22.
23.	" Asian-American	23.
24.	" Latin/Mexican American	24.
25.	Attitude toward School	25.
	" " Counselors	26.
	" " Teachers	27.
	Educational Aspirations	28.
	" Expectations	29.
	Participation (Attending)	30.
	Club Activities (Responding)	31.
	Aggression Received	32.
	Sent to the Office	33.
	Fairness in Treatment at the Office	34.
	" " " " " " (by those sent)	35.
	" " " " " " (by those not sent)	36.
	Student Response to:	
	"How often do you feel good about yourself?"	37.
	"How often do you succeed when you attempt something?"	38.

DATA PROCESSING INSTRUCTIONS FOR COLLATION OF INTEGRATION SURVEY DATA*

Variable No.	ELEMENTARY	SECONDARY
1.	PRESLUGGED (from student registration and the basic testing program)	
2.	"	"
3.	"	"
4.	"	"
5.	"	"
	From "Teacher's Rating" form:	
6.	** (Σi 1, 4, 8, 9, 17, & 18)	$\frac{(\Sigma i\ 1, 4, 8, 9, 17, \&\ 18)(100)}{6}$
7.	(Σi 2, 6, 7, 10, 11, & 15)	$\frac{(\Sigma i\ 2, 6, 7, 10, 11, \&\ 15)(100)}{6}$
8.	(Σi 3, 5, 12, 13, 14, & 16)	$\frac{(\Sigma i\ 3, 5, 12, 13, 14, \&\ 16)(100)}{6}$
9.	(i 19)(100)	
10.	(i 20)(100)	
11.	(i 21)(100)	
12.	$\frac{(\Sigma i\ 22, 23, \&\ 24)(100)}{3}$	
		From "Secondary Report" form:
13.	(Σi 25, 26, & 27)	$\frac{(\Sigma i\ 29, 30, \&\ 31)(100)}{3}$
14.	(Σi 28 & 29)	NA
	From Elementary "Student Report" form:	
15.	(Σi 1, 3, 5, 7, 9, 10, 12, 14, 16, & 18)	$\frac{(\Sigma i\ 69 \text{ thru } 84)(100)}{16}$
16.	(Σi 11, 13, 15, & 17)	$\frac{(\Sigma i\ 85, 87, 90, 91, \&\ 93)(100)}{5}$
17.	(Variable 15 score)-(Variable 16 score x 2.5)	(Variable 15 score)-(Variable 16 score)
18.	i 18	(i 89)(100)
19.	Each individual receives a score derived from: [the sum of scores received by each individual as rated by all other individuals in that class and divided by the number of times he could have been chosen by all others (N-1).] = Average Score	NA

---

*Each variable is scored as follows: the sum of the average scores received by (a) Anglos, (b) Blacks, (c) Native Americans, (d) Asian Americans, and (e) Latin/Mexican Americans (in that school, grade, etc.) ÷ N.

**Σi = the sum of the scores on the items identified.

Variable No.	ELEMENTARY	SECONDARY
20.	Each individual receives a score derived from: the sum of scores received by each individual as rated by all Anglo individuals in that class and divided by the number of times he could have been chosen by Anglo students in that class (if he is an Anglo, that number would be N-1 because he does not receive a score from himself).	$\frac{(\Sigma i\ 54,\ 59,\ \&\ 64)(100)}{3}$
21.	Each individual receives a score derived from: the sum of scores received by each individual as rated by all Black individuals in that class and divided by the number of times he could have been chosen by Black students in that class (if he is a Black, that number would be N-1 because he does not receive a score from himself).	$\frac{(\Sigma i\ 55,\ 60,\ \&\ 65)(100)}{3}$
22.	Each individual receives a score derived from: the sum of scores received by each individual as rated by all Native American individuals in that class and divided by the number of times he could have been chosen by Native American students in that class (if he is a Native American, that number would be N-1 because he does not receive a score from himself).	$\frac{(\Sigma i\ 58,\ 63,\ \&\ 68)(100)}{3}$
23.	Each individual receives a score derived from: the sum of scores received by each individual as rated by all Asian American individuals in that class and divided by the number of times he could have been chosen by Asian American students in that class (if he is an Asian American, that number would be N-1 because he does not receive a score from himself).	$\frac{(\Sigma i\ 57,\ 62,\ \&\ 67)(100)}{3}$
24.	Each individual receives a score derived from: the sum of scores received by each individual as rated by all Latin/Mexican American individuals in that class and divided by the number of times he could have been chosen by Latin/Mexican American students in that class (if he is a Latin/Mexican American, that number would be N-1 because he does not receive a score from himself).	$\frac{(\Sigma i\ 56,\ 61,\ \&\ 66)(100)}{3}$
25.	Student Report: (Σi 2, 4, 6, & 8)	$\frac{(\Sigma i\ 4,\ 5,\ 6,\ \&\ 7)(100)}{4}$

Variable No.	SECONDARY
26.	$\frac{(\Sigma i\ 8 \text{ thru } 15)(100)}{8}$
27.	$\frac{(\Sigma i\ 16 \text{ thru } 23)(100)}{8}$
28.	(i 2)
29.	(i 3)
30.	$\frac{(\Sigma i\ 24,\ 25,\ \&\ 26)(100)}{3}$
31.	$\frac{(\Sigma i\ 34 \text{ thru } 53)(100)}{20}$
32.	$\frac{(\Sigma i\ 27,\ 28,\ \&\ 32)(100)}{3}$
33.	(i 33)(100)
34.	(i 92)(100)
35.	Score only individuals indicating other than NEVER on Item 33 - (i 92)(100)
36.	Score only individuals indicating NEVER on Item 33 - (i 92)(100)
37.	(i 88)(100)
38.	(i 86)(100)

TACOMA PUBLIC SCHOOLS

DATE: April 29, 1977

P. O. Box 1357
Tacoma, Washington

INTER-OFFICE MEMORANDUM

SUBJECT: Answer Sheet Scoring

TO: Dan Moran

FROM: Bruce Arneklev

Below is an inventory of answer sheets which I have forwarded to Data Processing for scoring. The following outputs are desired:

1. Total district frequency distributions for 1977
   a. for all the elementary data (for third and sixth combined);
   b. for all third grade data;
   c. for all sixth grade data;
   d. and for all the junior high data.

2. Frequency distribution for each elementary school 1976 vs. 1977. (Note that McCarver and Stanley were not listed in 1976.)

3. Frequency distribution data on each junior high school 1976 vs. 1977.

4. Frequency distribution of elementary "treatment" group" 1976 vs. 1977 including Follow Through students. (Boze, Bryant, Franklin, Lister, Jefferson, McKinley, Reed, Rogers, Roosevelt, Sheridan, Wainwright, and Willard. Birney, Delong, McCarver and Stanley are not part of the treatment group.

5. Frequency distribution of junior high school "treatment group" 1976 vs. 1977. (Baker, Gault, Hunt, Lee, Mason, McIlvaigh, and Truman.)

Answer Sheets:

Elementary Schools	Teachers	Students	Sociometrics	Junior High Schools	Teachers	Students
Birney	78	78	78	Baker	70	82
Boze	95	95	95	Gault	67	68
Bryant	63	63	63	Gray	67	67
DeLong	104	104	104	Hunt	114	101
Franklin	110	110	110	Lee	89	79
Jefferson	99	99	99	Mason	99	89
Lister	127	127	127	McIlvaigh	85	77
McCarver	77	77	77	Meeker	28	28
McKinley	105	105	105	Stewart	100	100
Reed	41	41	41	Truman	66	68
Rogers	85	85	85			
Roosevelt	52	52	52			
Sheridan	95	95	95			
Stanley	56	56	56			
Wainwright	111	111	111			
Willard	46	46	46			

Bla/dz

TACOMA PUBLIC SCHOOLS

P.O. BOX 1357
TACOMA, WASHINGTON 98401
383-1811

ALEX SERGIENKO, SUPERINTENDENT
DEL CROSS, ASSOCIATE SUPERINTENDENT
FRED WARNER, ASSOCIATE SUPERINTENDENT
TONEY SHELTON,
BUSINESS MANAGER AND DEPUTY SECRETARY

DR. NORMAN R. ANDERSON, PRESIDENT
DAVID R. TUELL, JR., VICE-PRESIDENT
J. L. BOZE
ADELE C. DURKIN
FRANK J. GILLIHAN

March 22, 1977

Dear Parent or Guardian:

For several years, the Tacoma Public Schools have maintained the policy of informing parents before their children become involved in special projects. This provides an opportunity for raising questions, previewing materials, and, if desired, having children excused from such projects.

This letter is to inform you about an integration survey which will occur during the middle of April, 1977.

During each of the past four years integration surveys have been used to gather information from more than 2,000 third, sixth and eighth grade students in over 20 schools. This information has been used to document the need for services, and to evaluate results of efforts expended under the District's voluntary desegregation/integration plan.

As a continuation of the information collection process, your child, whose name appears on the envelope, may be asked to respond on a questionnaire at his/her school this year. All information will be collected in less than one hour in regular classrooms by regular staff members. All information will be collected and processed in a confidential way, so that the responses of any one student will not be associated with the name of that child.

Unless we hear from you, we will assume approval for your child to participate is granted. If you want further information, please call the principal at your school. If you do not want your child to participate, you may sign in the space below and return this letter to the school office.

Sincerely,

Alex Sergienko

Alex Sergienko
Superintendent

Please excuse my child from participation in the integration survey.

Date ____________________

Parent or Guardian's Signature ____________________

Child's Name ____________________

—an equal opportunity employer—

TACOMA PUBLIC SCHOOLS

DATE: May 2, 1977

P. O. Box 1357
Tacoma, Washington

INTER-OFFICE MEMORANDUM

SUBJECT: Feedback on Survey

TO: Integration Survey Coordinators

FROM: Bruce L. Arneklev
Research and Evaluation

Thank you for your indispensable contribution in completing the integration survey again this year. All answer sheets are now with data processing for scoring, and I am pressing to get results back to you this month.

Some of you expressed an interest in parent reaction. Here is comparisons of requests for excusals by school, 1977 vs. 1976. It may be noted the percentage of students excused at the elementary level was up slightly, while the percentage at the junior high level was down a corresponding amount.

Elementary Schools

School	Number of Letters Sent in 1977	Number of Excusals Reported	
		1977	1976
Birney	83	2	0
Boze	109	4	0
Bryant	70	4	1
Delong	125	5	5
Franklin	123	7	4
Jefferson	125	4	3
Lister	146	1	5
McCarver	87	1	*
McKinley	112	4	6
Reed	51	6	2
Rogers	98	1	3
Roosevelt	78	1	2
Sheridan	104	2	6
Stanley	62	4	*
Wainwright	113	1	0
Willard	50	0	0
	1536	47 (3.1%)	37 (2.5%)

Junior High Schools

School	Number of Letters Sent in 1977	Number of Excusals Reported	
		1977	1976
Baker	93	0	0
Gault	73	0	5
Gray	79	3	5
Hunt	121	5	0
Lee	90	1	3
Mason	101	1	2
McIlvaigh	87	0	0
Meeker	31	0	0
Stewart	118	7	6
Truman	76	4	6
	869	21 (2.4%)	27 (3.2%)

*McCarver and Stanley were not included in the 1976 survey.

BLA/le

TACOMA PUBLIC SCHOOLS

P.O. BOX 1357
TACOMA, WASHINGTON 98401
383-1811

ALEX SERGIENKO, SUPERINTENDENT
DEL CROSS, ASSOCIATE SUPERINTENDENT
FRED WARNER, ASSOCIATE SUPERINTENDENT
TONEY SHELTON,
BUSINESS MANAGER AND DEPUTY SECRETARY

DR. NORMAN R. ANDERSON, PRESIDENT
DAVID R. TUELL, JR., VICE-PRESIDENT
J. L. BOZE
ADELE C. DURKIN
FRANK J. GILLIHAN

March 22, 1977

TO ALL DISTRICT STAFF WHO WILL BE INVOLVED IN THE 1977 INTEGRATION SURVEY:

One of Tacoma Public Schools' highest priorities for the past several years has been given to efforts to achieve and maintain desegregation. The results of those efforts have been gratifying to all of us who have been involved in the process. To continue in this process, we have extended the priority for desegregation to include efforts toward integration. Monitoring progress to that end is a complex challenge.

The Programmed Research in Integrated Multi-ethnic Education (PRIME) materials which we have adapted and used for the past four years provide a systematic procedure for measuring variables related to integration. Plans are now under way to use these materials again to monitor the integration climate surrounding third, sixth, and eighth grade students. Specific purposes of this survey are:

(1) to provide data upon which the district and individual schools therein can reflect as we strive to improve the quality of education for all children;

(2) to monitor changes of scores as they relate to efforts by the schools to improve their integration posture;

(3) to honor commitments made in applications for federal funds under the Emergency School Aid Act.

Information derived through this survey will certainly not be the last word as to what is needed or what has happened in any one school, but it is further evidence of what might be examined.

It is my hope that by sharing in the responsibility for collecting and interpreting information like this, we can be in a better position to plan and implement the best possible educational programs to all Tacoma youngsters. Your cooperation is appreciated.

Alex Sergienko

Alex Sergienko
Superintendent

BLA/le

—an equal opportunity employer—

Again this year for the fifth consecutive year, over two thousand third, sixth and eighth grade students in Tacoma are participating in a survey to identify needs and monitor progress in the district's desegregation/integration program. As a teacher of one or more of the selected students, you are being asked to provide some of your impressions.

Please use the enclosed forms to describe selected students with whom you have worked. The name of each student to be rated appears at the bottom of the page. Upon completing all of the rating forms, remove the stub bearing the student's name and your name by tearing along the perforated line. When this stub is removed, data will be analyzed only in terms of groups of students and will not be associated with the name of any student or teacher.

Student and teacher names and information at the top of the page were printed by computer when the sample was selected for each school. The information at the top of the page was printed to simplify the teacher's task and to facilitate data processing.

Please read each item carefully before marking your answer. Positive and negative adjectives have been reversed on certain items in the first section, which is sometimes called a "semantic differential" scale. The second section (items 19-24) is a "Likert" type of scale to gather further information about how each child is functioning in school. The last section relates to the quantity and quality of parent participation.

All forms must be returned to me by ____________. Use the envelope in which you received these materials to return them. In this way I can account for all forms from this school before sending them for scoring in another envelope.

Judgment about each child must be made by you independently, so please do not discuss your ratings with other staff.

Thank you for your cooperation.

TEACHER'S RATING

Scoring Values, added)

PROGRAM: CIP ○ COP ○ ESAA ○ FT ○ CTC ○ IEP ○ TA ○ T I ○ URRD ○ X ○ Y ○ Z ○

SCHOOLS

ELEM: ARLIN ○ BIRN ○ BOZE ○ BPT ○ BRYT ○ [illegible] ○ [illegible] ○ DOWN ○ [illegible] ○ FAWL ○ FERN ○ FRLN ○ [illegible] ○ GRNT ○ JEFF ○ LARC ○ LIST ○ LOWE ○ LYON ○ MAUS ○ [illegible] ○ MANN ○ [illegible] ○ MCKY ○ NET ○ OAKL ○ PKAV ○ [illegible] ○ ROLR ○ ROSV ○ RUST ○ SEWD ○ SHON ○ SHMN ○ STAN ○ TRUM ○ WAIN ○ WASH ○ WHTM ○ WHIR ○ WILL ○

SECONDARY: BAKR ○ CAUL ○ GRAY ○ HUNT ○ [illegible] ○ [illegible] ○ [illegible] ○ MEEK ○ STEW ○ TRUM ○ FOSS ○ LINC ○ M TH ○ STAD ○

TEST NUMBER

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

READING RAW SCORE

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

ARITHMETIC RAW SCORE

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

ETHNICITY: ANGLO AMER ○ BLACK AMER ○ NATIVE AMER ○ ASIAN AMER ○ LATIN/MEX AMER ○ OTHER ○

SEX: MALE ○ FEM ○

GRADE: K ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○

1.	This student is:	Extroverted	5	4	3	2	1	Introverted
2.	This student is:	Cruel	1	2	3	4	5	Kind
3.	This student is:	Dull-minded	1	2	3	4	5	Intelligent
4.	This student is:	Unsociable	1	2	3	4	5	Sociable
5.	This student is:	Slow	1	2	3	4	5	Quick
6.	This student is:	Obedient	5	4	3	2	1	Disobedient
7.	This student is:	Prone to anger	1	2	3	4	5	Not prone to anger
8.	This student is:	Cold	1	2	3	4	5	Warm
9.	This student is:	Colorful	5	4	3	2	1	Colorless
10.	This student is:	Easy to discipline	5	4	3	2	1	Difficult to discipline
11.	This student is:	Obstructive	1	2	3	4	5	Cooperative
12.	This student is:	Able to concentrate	5	4	3	2	1	Subject to distraction
13.	This student is:	Disorganized	1	2	3	4	5	Organized
14.	This student has a	Good memory	5	4	3	2	1	Poor memory
15.	This student is:	Patient	5	4	3	2	1	Impatient
16.	This student is:	Persevering	5	4	3	2	1	Quitting
17.	This student is:	Aloof	1	2	3	4	5	Friendly
18.	This student is:	Cheerful	5	4	3	2	1	Morose

	ALWAYS	MOST OF THE TIME	SOME OF THE TIME	SELDOM	NEVER
19. This student performs well in school	5	4	3	2	1
20. This student has an adequate self-concept (an appreciation for his/her worthiness)	5	4	3	2	1
21. This student can do most of the things he/she tries	5	4	3	2	1
22. This student attempts to dominate or bully other students	5	4	3	2	1
23. This student publicly brags or boasts about exploits	5	4	3	2	1
24. This student continually seeks attention as evidenced by behavior such as speaking out of turn and making unnecessary noise	5	4	3	2	1

25. How many times has this student's mother and/or father come to school for PTA open house or other school events this year?	1	2	3	4	5	6	7	8	9	10
26. How many offices, if any, has this student's mother and/or father held during this school year (PTA, room mother, etc.)?	1	2	3	4	5	6	7	8	9	10
27. How many times has this student's mother and/or father come in for a conference on his school work this year?	1	2	3	4	5	6	7	8	9	10
28. How many times have this student's parents come to visit or observe in the classroom?	1	2	3	4	5	6	7	8	9	10
29. How many times have this student's parents come to assist in the classroom (tutoring, secretarial, listening, reading, field trips, etc)?	1	2	3	4	5	6	7	8	9	10

FOLD TO BREAK PERFORATED STRIP HERE. THEN TEAR OFF AND DESTROY.

STUDENT NAME

TEACHER/ROOM

TACOMA PUBLIC SCHOOLS

OFFICE OF EVALUATION

SECONDARY STUDENT QUESTIONNAIRE

We are using this period to ask you to answer some questions about your school. We want to know how you feel about the school, your teachers, and other students. This is not a test. We want to know what you honestly think. No one in your school will see how you answer the questions. When you have completed this questionnaire, you will be asked to tear your name off of your answer sheet. Results will be scored by computer and analyzed to evaluate the effectiveness of your school in meeting student needs.

DIRECTIONS FOR MARKING ANSWER SHEET:

The top of your answer sheet has been marked in accordance with school records to assist us in processing data. The marks you make should be placed in response to Items 1 to 93 in the large box labeled "Part One". Please use the special pencil provided, or a #2 lead pencil. For each test item, completely fill in the shaded oval which indicates your answer. Your marks should be dark and should not go outside the shaded space provided. If you make a mistake erase it completely and mark your answer again. Mark only one answer for each question. Do not make unnecessary marks on the answer sheet, as they may cause your answers to be scored incorrectly.

PART ONE

(Educational Considerations)

Read the following questions. Mark your answers only on the answer sheet which accompanies this booklet.

1. How far did your father go in school? (If your father does not live with you or is not alive, then answer for the person in your house who is working or is head of the house.)

1(1) Did not finish high school
2(2) Finished high school and stopped
3(3) Went to college or trade school for a while
4(4) Finished college and stopped, B. A. degree
5(5) Went beyond college, Masters or Doctors degree

2. If you could go as far as you wanted to go in school, how far would you go?

1(1) I would not finish high school
2(2) I would finish high school and stop
3(3) I would go to college or trade school for a while
4(4) I would finish college and stop, B. A. degree
5(5) I would go beyond college, Masters or Doctors degree

3. How far do you really expect you will go in school?

1(1) I will probably not finish high school
2(2) I will probably finish high school and stop
3(3) I will probably go to college or trade school for a while
4(4) I will probably finish college and stop, B. A. degree
5(5) I will probably go beyond college, Masters or Doctors degree

(Attitudes Toward School, Counselors, and Teachers)

We want to know how you feel about your school. If you think your school is a lot like one of the words, fill in the space nearest the word. If you think your school is someplace between the words, fill in a space near the middle.

SAMPLE ITEMS

One student thought the school was very good, and answered this way.

Good [✓ 1] 2 3 4 5 Bad

Another student thought the school was very bad, and answered this way.

Good 1 2 3 4 [✓ 5] Bad

Another student thought the school was rather good, and answered this way.

Good 1 [✓ 2] 3 4 5 Bad

Another student thought the school was rather bad, and answered this way.

Good 1 2 3 [✓ 4] 5 Bad

Another student thought the school was neither good nor bad, and answered this way.

Good 1 2 [✓ 3] 4 5 Bad

Work on the following questions on your answer sheet. Be sure to mark only on your answer sheet. Answer every question.

YOUR SCHOOL

4. Good 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Bad
5. Not a waste of time 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} A waste of time
6. Will help me have a better life 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Will not help me have a better life
7. Friendly 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Unfriendly

Now think about the counselor you have.

YOUR COUNSELOR

8. Good Counselor 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Poor Counselor
9. Does not like students 1^{1} 2^{2} 3^{3} 4^{4} 5^{5} Likes students
10. Interested in me 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Not interested in me
11. Enemy 1^{1} 2^{2} 3^{3} 4^{4} 5^{5} Friend
12. Cares about my future 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Doesn't care about my future
13. Helps me 1^{5} 2^{4} 3^{3} 4^{2} 5^{1} Doesn't help me
14. Doesn't trust me 1^{1} 2^{2} 3^{3} 4^{4} 5^{5} Trusts me
15. Does not listen to me 1^{1} 2^{2} 3^{3} 4^{4} 5^{5} Listens to me

Now think about the teacher whose name appears on the bottom of your answer sheet.

		THE TEACHER NAMED (IS)					
16.	A good teacher	1^5	2^4	3^3	4^2	5^1	A poor teacher
17.	Does not like students	1^1	2^2	3^3	4^4	5^5	Likes students
18.	Interested in me	1^5	2^4	3^3	4^2	5^1	Not interested in me
19.	An enemy	1^1	2^2	3^3	4^4	5^5	A friend
20.	Cares about my future	1^5	2^4	3^3	4^2	5^1	Doesn't care about my future
21.	Helps me	1^5	2^4	3^3	4^2	5^1	Doesn't help me
22.	Doesn't trust me	1^1	2^2	3^3	4^4	5^5	Trusts me
23.	Does not listen to me	1^1	2^2	3^3	4^4	5^5	Listens to me

(Frequency of Events)

We want to know about how often some things happen at your school. If it happens all the time, fill in the "1" space on your answer sheet. If it happens about a couple times a month, fill in the "2" space. If it happens only a couple times a year, fill in the "3" space. If it never happens, fill in the "4" space.

		ALL THE TIME	COUPLE TIMES A MONTH	COUPLE TIMES A YEAR	NEVER
24.	How often do you go to ball games and other sports at your school?	1^4	2^3	3^2	4^1
25.	How often do you go to school parties, dances, and things like that?	1^4	2^3	3^2	4^1
26.	How often do you go to meetings of school clubs?	1^4	2^3	3^2	4^1
27.	How often do other students pick on you at school?	1^4	2^3	3^2	4^1
28.	How often do other students try to extort or take money from you?	1^4	2^3	3^2	4^1
29.	How often does one of your parents come to school for a parent meeting like PTA, booster club, or things like that?	1^4	2^3	3^2	4^1
30.	How often does one of your parents come to school to attend a ball game, play, concert, or activity like that?	1^4	2^3	3^2	4^1
31.	How often does one of your parents come to school for a conference about your classwork?	1^4	2^3	3^2	4^1
32.	How often do other students try to hassle you at school?	1^4	2^3	3^2	4^1
33.	How often do you get sent to the office for getting into trouble?	1^4	2^3	3^2	4^1

(Frequency of Participation)

We would like to know something about the school activities in which you participate. Below is a list of activities. If, as far as you know the activity is not offered at your school, fill in the "1" space on your answer sheet. If the activity is offered but you do not participate fill in the "2" space. If you participate as a member, fill in the "3" space. If you are an officer or teacher in the specified activity, fill in the number "4" space.

		NOT OFFERED	DON'T PARTICIPATE	PARTICIPATE	OFFICER OR LEADER
34.	Band, orchestra, instrumental group	1 1	2 2	3 3	4 4
35.	Chorus or vocal group	1 1	2 2	3 3	4 4
36.	Student Government (Student Council, Legislative Council, Class Officer, etc.)	1 1	2 2	3 3	4 4
37.	Special group to set up ethnic activities	1 1	2 2	3 3	4 4
38.	Scholarship Club (Honor Society, Key Club, Scholarship Federation, etc.)	1 1	2 2	3 3	4 4
39.	Yearbook staff	1 1	2 2	3 3	4 4
40.	School Paper staff	1 1	2 2	3 3	4 4
41.	Cheerleader, songleader, twirler	1 1	2 2	3 3	4 4
42.	Pep squad, drill team	1 1	2 2	3 3	4 4
43.	Student leader or assistant for class	1 1	2 2	3 3	4 4
44.	Dramatics -- worked in a play, assembly, or campus program	1 1	2 2	3 3	4 4
45.	Academic Club (such as Science Club, Future Teachers, 4-H, French Club, etc.)	1 1	2 2	3 3	4 4
46.	Recreational Club (Ski Club, Chess Club, etc.)	1 1	2 2	3 3	4 4
47.	Worked on Special Drive of some kind	1 1	2 2	3 3	4 4
48.	Service Club (Ushers, Volunteers, American Field Service, etc.)	1 1	2 2	3 3	4 4
49.	Art and/or craft club (woodwork, pottery, jewelry, etc.)	1 1	2 2	3 3	4 4
50.	Debating society or club	1 1	2 2	3 3	4 4
51.	Intramural Sports	1 1	2 2	3 3	4 4
52.	Interscholastic Varsity Sports	1 1	2 2	3 3	4 4
53.	Interscholastic Junior Varsity Sports	1 1	2 2	3 3	4 4

(Cross-Ethnic Associations)

On your answer sheet, fill in the box under the heading which best answers the following questions.

Think about the other students with whom you usually eat lunch:

	ALL	MOST	ABOUT HALF	A FEW	NONE
54. How many are white?	1 5	2 4	3 3	4 2	5 1
55. How many are Black?	1 5	2 4	3 3	4 2	5 1
56. How many are Mexican-American?	1 5	2 4	3 3	4 2	5 1
57. How many are Asian-American?	1 5	2 4	3 3	4 2	5 1
58. How many are American Indian?	1 5	2 4	3 3	4 2	5 1

Think about the other students you usually hang around with after school:

	ALL	MOST	ABOUT HALF	A FEW	NONE
59. How many are white?	1 5	2 4	3 3	4 2	5 1
60. How many are Black?	1 5	2 4	3 3	4 2	5 1
61. How many are Mexican-American?	1 5	2 4	3 3	4 2	5 1
62. How many are Asian-American?	1 5	2 4	3 3	4 2	5 1
63. How many are American Indian?	1 5	2 4	3 3	4 2	5 1

Think about the other students with whom you usually go to ballgames and other school activities:

	ALL	MOST	ABOUT HALF	A FEW	NONE
64. How many are white?	1 5	2 4	3 3	4 2	5 1
65. How many are Black?	1 5	2 4	3 3	4 2	5 1
66. How many are Mexican-American?	1 5	2 4	3 3	4 2	5 1
67. How many are Asian-American?	1 5	2 4	3 3	4 2	5 1
68. How many are American Indian?	1 5	2 4	3 3	4 2	5 1

(Perceptions of Self)

We want to know what you do and how you feel about things. If you "Always" do what is asked in the question, fill in the "1" space on your answer sheet. If you do it "Most of the Time", fill in the "2" space. If you do it "Some of the Time", fill in the "3" space. If you "Never" do it, fill in the "4" space.

		ALWAYS	MOST OF THE TIME	SOME OF THE TIME	NEVER
69.	How often do you do good classwork?	1^{4}	2^{3}	3^{2}	4^{1}
70.	How often do other students seem glad you are in this school?	1^{4}	2^{3}	3^{2}	4^{1}
71.	How often do you feel worried when the teacher asks you a question?	1^{1}	2^{2}	3^{3}	4^{4}
72.	How often do you feel upset when you get a low grade?	1^{1}	2^{2}	3^{3}	4^{4}
73.	How often are you good at games and sports?	1^{4}	2^{3}	3^{2}	4^{1}
74.	How often do you feel like you do not belong in this school?	1^{1}	2^{2}	3^{3}	4^{4}
75.	How often do you feel worried that you might fail your classwork?	1^{1}	2^{2}	3^{3}	4^{4}
76.	How often do you feel upset if you do not get high grades?	1^{1}	2^{2}	3^{3}	4^{4}
77.	How often do you feel you are not as smart as other students?	1^{1}	2^{2}	3^{3}	4^{4}
78.	How often do teachers like to have you around?	1^{4}	2^{3}	3^{2}	4^{1}
79.	How often do you feel worried about taking tests?	1^{1}	2^{2}	3^{3}	4^{4}
80.	How often do you wish you could do things better than other students?	1^{1}	2^{2}	3^{3}	4^{4}
81.	How often do you wish you were someone else?	1^{1}	2^{2}	3^{3}	4^{4}
82.	How often do you feel unhappy because other students don't choose you to do things?	1^{1}	2^{2}	3^{3}	4^{4}
83.	How often do you feel afraid you will get behind in your school work?	1^{1}	2^{2}	3^{3}	4^{4}
84.	How often do you feel bad because others are chosen to lead school activities?	1^{4}	2^{3}	3^{2}	4^{1}
85.	How often do you know what to say to people?	★ 1^{4}	2^{0}	3^{0}	4^{0}
86.	How often do you succeed when you attempt something?	1^{4}	2^{3}	3^{2}	4^{1}
87.	How often do you tell the truth?	★ 1^{4}	2^{0}	3^{0}	4^{0}
88.	How often do you feel good about yourself?	1^{4}	2^{3}	3^{2}	4^{1}
89.	How often are you good at school work?	1^{4}	2^{3}	3^{2}	4^{1}
90.	How often do you like everyone?	★ 1^{4}	2^{0}	3^{0}	4^{0}
91.	How often do you get angry?	★ 1^{0}	2^{0}	3^{0}	4^{4}
92.	How often are students treated fairly when sent to the office?	1^{4}	2^{3}	3^{2}	4^{1}
93.	How often are you happy?	★ 1^{4}	2^{0}	3^{0}	4^{0}

★Only extreme response has score value

END OF SURVEY

Please check to make sure you have one answer for every question, and that there are no unwanted marks. Then fold and remove the bottom of the page on which your name is printed.

SECONDARY REPORT

(Score Values as listed
in the test booklet)

PROGRAM

CIP ○	COP ○	ESAA ○
TT ○	GTC ○	IEP ○
TA ○	T I ○	URRD ○
X ○	Y ○	Z ○

SCHOOLS

ELEM

[illegible] ○	BAN ○	[illegible] ○	BAT ○	BRYT ○	[illegible] ○	[illegible] ○	DOAN ○	[illegible] ○	FAW ○	FERN ○	FRLN ○	[illegible] ○	GANT ○	HOYT ○
[illegible] ○	AR ○	[illegible] ○	CON ○	LYON ○	[illegible] ○	[illegible] ○	MANN ○	[illegible] ○	[illegible] ○	NET ○	OAK ○	[illegible] ○	[illegible] ○	[illegible] ○
[illegible] ○	[illegible] ○	[illegible] ○	[illegible] ○	SHON ○	[illegible] ○	STAN ○	[illegible] ○	[illegible] ○	WASH ○	WHTM ○	WHTR ○	[illegible] ○	12 ○	13 ○

SECONDARY BAKR ○ [illegible] ○ GRAY ○ MINT ○ LEE ○ [illegible] ○ [illegible] ○ MEEK ○ STEW ○ TRUM ○ FUSS ○ [illegible] ○ [illegible] ○ STAG ○ [illegible] ○

TEST NUMBER

○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

READING RAW SCORE

○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

ARITHMETIC RAW SCORE

○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

ETHNICITY ANGLO AMER ○ BLACK AMER ○ NATIVE AMER ○ ASIAN AMER ○ LATIN/MEX AMER ○ OTHER ○

SEX MALE ○ FEM ○

GRADE K ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○

1	1	2	3	4	5	26	1	2	3	4	5	51	1	2	3	4	5	76	1	2	3	4	5
2	1	2	3	4	5	27	1	2	3	4	5	52	1	2	3	4	5	77	1	2	3	4	5
3	1	2	3	4	5	28	1	2	3	4	5	53	1	2	3	4	5	78	1	2	3	4	5
4	1	2	3	4	5	29	1	2	3	4	5	54	1	2	3	4	5	79	1	2	3	4	5
5	1	2	3	4	5	30	1	2	3	4	5	55	1	2	3	4	5	80	1	2	3	4	5
6	1	2	3	4	5	31	1	2	3	4	5	56	1	2	3	4	5	81	1	2	3	4	5
7	1	2	3	4	5	32	1	2	3	4	5	57	1	2	3	4	5	82	1	2	3	4	5
8	1	2	3	4	5	33	1	2	3	4	5	58	1	2	3	4	5	83	1	2	3	4	5
9	1	2	3	4	5	34	1	2	3	4	5	59	1	2	3	4	5	84	1	2	3	4	5
10	1	2	3	4	5	35	1	2	3	4	5	60	1	2	3	4	5	85	1	2	3	4	5
11	1	2	3	4	5	36	1	2	3	4	5	61	1	2	3	4	5	86	1	2	3	4	5
12	1	2	3	4	5	37	1	2	3	4	5	62	1	2	3	4	5	87	1	2	3	4	5
13	1	2	3	4	5	38	1	2	3	4	5	63	1	2	3	4	5	88	1	2	3	4	5
14	1	2	3	4	5	39	1	2	3	4	5	64	1	2	3	4	5	89	1	2	3	4	5
15	1	2	3	4	5	40	1	2	3	4	5	65	1	2	3	4	5	90	1	2	3	4	5
16	1	2	3	4	5	41	1	2	3	4	5	66	1	2	3	4	5	91	1	2	3	4	5
17	1	2	3	4	5	42	1	2	3	4	5	67	1	2	3	4	5	92	1	2	3	4	5
18	1	2	3	4	5	43	1	2	3	4	5	68	1	2	3	4	5	93	1	2	3	4	5
19	1	2	3	4	5	44	1	2	3	4	5	69	1	2	3	4	5	94	1	2	3	4	5
20	1	2	3	4	5	45	1	2	3	4	5	70	1	2	3	4	5	95	1	2	3	4	5
21	1	2	3	4	5	46	1	2	3	4	5	71	1	2	3	4	5	96	1	2	3	4	5
22	1	2	3	4	5	47	1	2	3	4	5	72	1	2	3	4	5	97	1	2	3	4	5
23	1	2	3	4	5	48	1	2	3	4	5	73	1	2	3	4	5	98	1	2	3	4	5
24	1	2	3	4	5	49	1	2	3	4	5	74	1	2	3	4	5	99	1	2	3	4	5
25	1	2	3	4	5	50	1	2	3	4	5	75	1	2	3	4	5	100	1	2	3	4	5

1	1	2	3	4	19	1	2	3	4	37	1	2	3	4	55	1	2	3	4
2	1	2	3	4	20	1	2	3	4	38	1	2	3	4	56	1	2	3	4
3	1	2	3	4	21	1	2	3	4	39	1	2	3	4	57	1	2	3	4
4	1	2	3	4	22	1	2	3	4	40	1	2	3	4	58	1	2	3	4
5	1	2	3	4	23	1	2	3	4	41	1	2	3	4	59	1	2	3	4
6	1	2	3	4	24	1	2	3	4	42	1	2	3	4	60	1	2	3	4
7	1	2	3	4	25	1	2	3	4	43	1	2	3	4	61	1	2	3	4
8	1	2	3	4	26	1	2	3	4	44	1	2	3	4	62	1	2	3	4
9	1	2	3	4	27	1	2	3	4	45	1	2	3	4	63	1	2	3	4
10	1	2	3	4	28	1	2	3	4	46	1	2	3	4	64	1	2	3	4
11	1	2	3	4	29	1	2	3	4	47	1	2	3	4	65	1	2	3	4
12	1	2	3	4	30	1	2	3	4	48	1	2	3	4	66	1	2	3	4
13	1	2	3	4	31	1	2	3	4	49	1	2	3	4	67	1	2	3	4
14	1	2	3	4	32	1	2	3	4	50	1	2	3	4	68	1	2	3	4
15	1	2	3	4	33	1	2	3	4	51	1	2	3	4	69	1	2	3	4
16	1	2	3	4	34	1	2	3	4	52	1	2	3	4	70	1	2	3	4
17	1	2	3	4	35	1	2	3	4	53	1	2	3	4	71	1	2	3	4
18	1	2	3	4	36	1	2	3	4	54	1	2	3	4	72	1	2	3	4

119

FOLD TO BREAK PERFORATED STRIP HERE THEN TEAR OFF AND DESTROY

STUDENT NAME

TEACHER/ROOM

ELEMENTARY STUDENT REPORT

This page will be used to give you some practice for completing the next page. Please follow the words on this page while they are read to you.

DIRECTIONS: All of us at one time or another think about ourselves. We have our own ideas of what we are like and what we like to do. Each of the following sentences describes a student.

	ALWAYS	SOMETIMES	NEVER
If you are always like the student described in the sentence, fill in the box under the word **ALWAYS.**	■	☐	☐
If you are sometimes like the student described in the sentence, fill in the box under the word **SOMETIMES.**	☐	■	☐
If you are never like the student described in the sentence, fill in the box under the word **NEVER.**	☐	☐	■

Now use your pencil to answer three questions for practice:

		ALWAYS	SOMETIMES	NEVER
A. THIS STUDENT LIKES TO READ	ARE YOU LIKE THIS STUDENT?	☐	☐	☐
B. THIS STUDENT RIDES A BUS TO SCHOOL	ARE YOU LIKE THIS STUDENT?	☐	☐	☐
C. THIS STUDENT LIKES TO PLAY GAMES	ARE YOU LIKE THIS STUDENT?	☐	☐	☐

On the next page you will find eighteen questions like the three which you have just completed. The information in the block at the top of the page has been filled in for you, so start with Question Number 1.

© LA

STUDENT REPORT (Elementary Score, Values added)

PROGRAM
CIP ○ COP ○ ESAA ○
FT ○ GTC ○ IEP ○
TA ○ T-1 ○ URRD ○
X ○ Y ○ Z ○

SCHOOLS
ELEM
ARLIN ○ BIRN ○ BOZE ○ BPT ○ BRYT ○ DPT ○ DLG ○ DOWN ○ EDIS ○ FAWC ○ FERN ○ FELN ○ GRG ○ GRNT ○ HOYT ○
JEFF ○ LARK ○ LIST ○ LOWL ○ LYON ○ MADS ○ MTOU ○ MANN ○ MCVR ○ MCKY ○ MET ○ OAKL ○ PKAV ○ PTRK ○ REED ○
ROGR ○ ROSV ○ RUST ○ SEWD ○ SHON ○ SHMN ○ STAN ○ TRUM ○ WAIN ○ WASH ○ WHTM ○ WHTR ○ WEL ○ ○ ○
SECONDARY BAKR ○ GAUL ○ GRAY ○ HUNT ○ LEE ○ MSON ○ MCK ○ MEEK ○ STEW ○ TRUM ○ FOSS ○ LINC ○ MATH ○ STAD ○ WILS ○

TEST NUMBER
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

READING RAW SCORE
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

ARITHMETIC RAW SCORE
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

ETHNICITY ANGLO AMER. ○ BLACK AMER. ○ NATIVE AMER. ○ ASIAN AMER. ○ LATIN/MEX AMER. ○ OTHER ○

SEX MALE ○ FEM ○

GRADE K ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○

		ALWAYS	SOMETIMES	NEVER
1. THIS STUDENT DOES THINGS AS WELL AS OTHER BOYS AND GIRLS.	ARE YOU LIKE THIS STUDENT?	2	1	0
2. THIS STUDENT DOES MANY INTERESTING THINGS IN SCHOOL.	ARE YOU LIKE THIS STUDENT?	2	1	0
3. THIS STUDENT HAS AS GOOD A TIME AS OTHER BOYS AND GIRLS.	ARE YOU LIKE THIS STUDENT?	2	1	0
4. THIS STUDENT LOOKS FORWARD TO RETURNING TO SCHOOL AFTER SUMMER VACATION.	ARE YOU LIKE THIS STUDENT?	2	1	0
5. THIS STUDENT HAS BETTER IDEAS THAN HIS OR HER FRIENDS.	ARE YOU LIKE THIS STUDENT?	2	1	0
6. THIS STUDENT LIKES TO DO THE THINGS THEY DO IN SCHOOL.	ARE YOU LIKE THIS STUDENT?	2	1	0
7. THIS STUDENT CAN DO MOST OF THE THINGS HE OR SHE TRIES.	ARE YOU LIKE THIS STUDENT?	2	1	0
8. THIS STUDENT FEELS LIKE HE OR SHE DOES NOT BELONG IN THIS SCHOOL.	ARE YOU LIKE THIS STUDENT?	0	1	2
9. THIS STUDENT WISHES HE OR SHE COULD DO A LOT OF THINGS BETTER.	ARE YOU LIKE THIS STUDENT?	0	1	2
10. THIS STUDENT DOES NOT GET ALONG WITH HIS OR HER TEACHERS AS WELL AS OTHER STUDENTS.	ARE YOU LIKE THIS STUDENT?	0	1	2
11. THIS STUDENT KNOWS WHAT TO SAY TO PEOPLE.	ARE YOU LIKE THIS STUDENT?	2	0	0
12. THIS STUDENT WISHES HE OR SHE WERE SOMEONE ELSE.	ARE YOU LIKE THIS STUDENT?	0	1	2
13. THIS STUDENT DOES NOT MAKE MISTAKES.	ARE YOU LIKE THIS STUDENT?	2	0	0
14. THIS STUDENT IS NOT AS SMART AS OTHER BOYS AND GIRLS.	ARE YOU LIKE THIS STUDENT?	0	1	2
15. THIS STUDENT DOES NOT GET INTO TROUBLE.	ARE YOU LIKE THIS STUDENT?	2	0	0
16. THIS STUDENT IS GOOD AT GAMES.	ARE YOU LIKE THIS STUDENT?	2	1	0
17. THIS STUDENT LIKES EVERYONE.	ARE YOU LIKE THIS STUDENT?	2	0	0
18. THIS STUDENT IS GOOD AT SCHOOL WORK.	ARE YOU LIKE THIS STUDENT?	2	1	0

FOLD TO BREAK PERFORATED STRIP HERE. THEN TEAR OFF AND DESTROY.

DENT NAME

TEACHER/ROOM

SOCIOMETRICS (Elementary Score, Values added)

PROGRAM
CP ○ COP ○ ESAA ○
FT ○ GTC ○ IEP ○
TA ○ T-1 ○ URRD ○
X ○ Y ○ Z ○

SCHOOLS
ELEM
ARLIN ○ BIRN ○ BOZE ○ BPT ○ BRYT ○ DPT ○ DELG ○ DOWN ○ EDIS ○ FAWC ○ FERN ○ FKLN ○ GEIG ○ GRNT ○ HOY
JEFF ○ LARC ○ LIST ○ LONG ○ LYON ○ MADS ○ MTOU ○ MANN ○ MCVR ○ MCKY ○ NET ○ OAKL ○ PKAV ○ PTDE ○ REE
ROGR ○ ROSV ○ RUST ○ SEWD ○ SHON ○ SHMN ○ STAN ○ TRUM ○ WAIN ○ WASH ○ WHTM ○ WHTR ○ WILL ○ (2) ○ ○
SECONDARY BAKR ○ GAUL ○ GRAY ○ HUNT ○ LEE ○ MSON ○ MCK ○ MEEK ○ STEW ○ TRUM ○ FOSS ○ LINC ○ MTH ○ STAD ○ WIL

TEST NUMBER
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

READING RAW SCORE
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

ARITHMETIC RAW SCORE
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

ETHNICITY ANGLO AMER. ○ BLACK AMER. ○ NATIVE AMER. ○ ASIAN AMER. ○ LATIN/MEX AMER. ○ OTHER ○

SEX MALE ○ FEM ○

GRADE K ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12 ○

We want to know how often you like to do things with the other students in this class. On the board are the names of all the students here today. Each name has a number beside it. Find the number beside your name. On this page find the same number and fill in the box under MYSELF. Mark MYSELF only ONCE. As each number and name is read, mark your choice as follows —

Fill in the box under ALWAYS if you would always want to do things with this student in class. ALWAYS ● SOMETIMES ○ NOT AT ALL ○

Fill in the box under SOMETIMES if you sometimes want to do things with this student in class. ALWAYS ○ SOMETIMES ● NOT AT ALL ○

Fill in the box under NOT AT ALL if you do not want to do things with this student in class. ALWAYS ○ SOMETIMES ○ NOT AT ALL ●

	ALWAYS	SOMETIMES	NOT AT ALL	MYSELF
1	2	1	0	0
2	○	○	○	○
3	2	1	0	0
4	○	○	○	○
5	2	1	0	0
6	○	○	○	○
7	2	1	0	0
8	○	○	○	○
9	2	1	0	0
10	○	○	○	○
11	2	1	0	0
12	○	○	○	○
13	2	1	0	0
14	○	○	○	○
15	2	1	0	0
16	○	○	○	○
17	2	1	0	0
18	○	○	○	○
19	○	○	○	○
20	○	○	○	○
21	2	1	0	0
22	○	○	○	○
23	2	1	0	0
24	○	○	○	○
25	2	1	0	0
26	○	○	○	○
27	2	1	0	0
28	○	○	○	○
29	2	1	0	0
30	○	○	○	○
31	2	1	0	0
32	○	○	○	○
33	2	1	0	0
34	○	○	○	○

FOLD TO BREAK PERFORATED STRIP HERE. THEN TEAR OFF AND DESTROY.

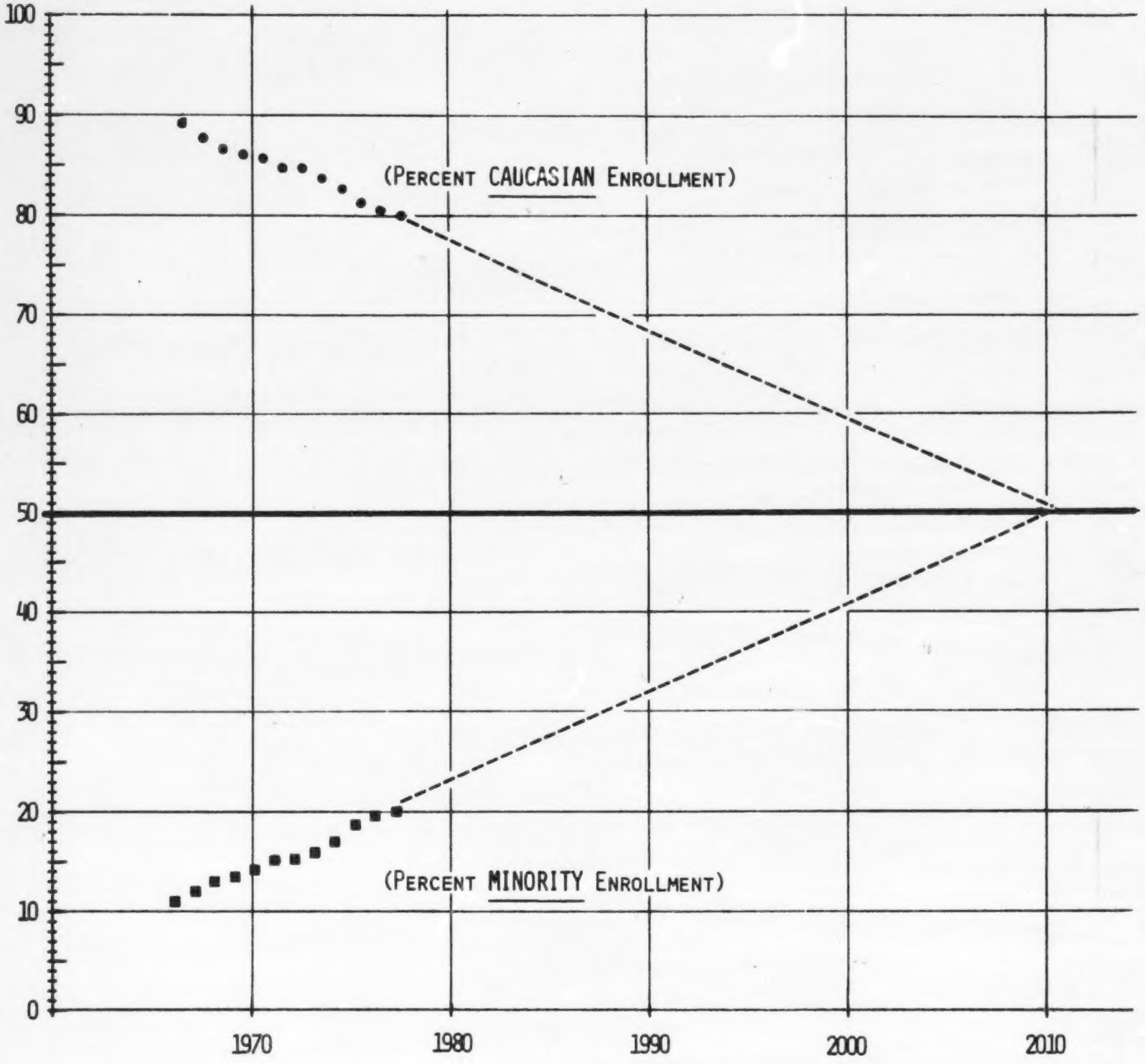
122

UDENT NAME

TEACHER/ROOM

APPENDIX I

Tacoma's Ethnic Enrollment Trend



YEAR	CAUCASIAN		NATIVE-AMERICAN		ASIAN		HISPANIC		BLACK		TOTAL MINORITY	
	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.
1966	88.9	31,519	*		*			*	7.7	2,726	11.1	3,945
1967	88.0	32,422	1.2	416	1.5	544		*	8.9	3,281	12.0	4,403
1968	87.2	32,646	1.2	446	1.4	410	.8	283	9.4	3,535	12.8	4,774
1969	86.6	32,195	1.2	453	1.4	533	1.0	365	9.8	3,640	13.4	4,991
1970	85.7	31,604	1.6	591	1.4	498	1.0	382	10.3	3,811	14.3	5,282
1971	84.8	30,475	1.7	605	1.5	541	1.1	397	10.9	3,917	15.2	5,460
1972	84.7	29,087	1.7	587	1.6	540	1.1	370	10.9	3,746	15.3	5,243
1973	83.8	28,406	1.7	576	1.8	595	1.4	463	11.3	3,830	16.2	5,464
1974	83.0	27,539	1.9	640	1.9	621	1.5	500	11.7	3,888	17.0	5,649
1975	81.3	26,570	2.5	822	2.4	793	1.5	470	12.3	4,016	18.7	6,101
1976	80.3	25,913	2.3	745	3.0	972	1.7	528	12.7	4,096	19.7	6,341
1977	80.0	25,155	2.5	797	2.9	906	1.7	525	12.9	4,055	20.0	6,283

* Data not available

Projection ---------

BLA/kj
11/76 (rev. 11/77)